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ROYAL COMMISSION OF INQUIRY INTO CERTAIN
DEATHS AT THE HOSPITAL FOR SICK CHILDREN AND
RELATED MATTERS.

Hearing held
8th floor
180 Dundas Street West
Toronto, Ontario

The Honourable Mr. Justice S.G.M. Grange

Commissioner

P.S.A. Lamek, Q.C.

Counsel

E.A. Cronk

Associate Counsel

Thomas Millar

Administrator

Transcript of evidence
for
January 26, 1984

VOLUME 93

OFFICIAL COURT REPORTERS

Angus, Stonehouse & Co. Ltd.,
14 Carlton Street, 7th Floor,
Toronto, Ontario M5B 1J2

595-1065



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Hearing held on the 8th Floor,
180 Dundas Street West, Toronto,
Ontario, on Thursday, the 26th
day of January, 1984.

THE HONOURABLE MR. JUSTICE S.G.M. GRANGE - Commissioner
THOMAS MILLAR - Administrator
MURRAY R. ELLIOT - Registrar

APPEARANCES:

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D. HUNT)	Counsel for the Attorney
L. CECCHETTO)	General and Solicitor General
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	and Coroner's Office)
I.J. ROLAND)	Counsel for The Hospital
M. THOMSON)	for Sick Children
R. BATTY)	
D. YOUNG	Counsel for The Metropolitan
	Toronto Police
W.N. ORTVED	Counsel for numerous Doctors
	at The Hospital for Sick
	Children
B. SYMES	Counsel for the Registered
	Nurses' Association of Ontario
	and 35 Registered Nurses at
	The Hospital for Sick Children
J. SOPINKA, Q.C.	Counsel for Susan Nelles -
	Nurse

(Cont'd)...



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APPEARANCES: (Continued)

G.R. STRATHY) Counsel for Phyllis Trayner -
E. FORSTER) Nurse

J.A. OLAH Counsel for Janet Brownless -
R.N.A.

B. KNAZAN Counsel for Mrs. M. Christie -
R.N.A.

S. LABOW Counsel for Mr. & Mrs. Gosselin,
Mr. & Mrs. Gionas, Mr. & Mrs.
Inwood, Mr. & Mrs. Turner,
Mr. & Mrs. Lutes and Mr. & Mrs.
Murphy (parents of deceased
children)

F.J. SHANAHAN Counsel for Mr. & Mrs. Dominic
Lombardo (parents of deceased
child Stephanie Lombardo); and
Heather Dawson (mother of
deceased child Amber Dawson)

W.W. TOBIAS Counsel for Mr. & Mrs. Hines
(parents of deceased child
Jordan Hines)

V. NESLUND Counsel for Dr. Buehler



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--- Upon commencing at 10:00 a.m.

DR. LESBIA F. SMITH, Resumed

DR. JAMES WALTER BEUHLER, Resumed

DR. EVELYN MacKENZIE WALLACE, Resumed

MR. ROBERT KUSIAK, Resumed

THE COMMISSIONER: Yes, Mr. Strathy.

CROSS-EXAMINATION BY MR. STRATHY: (Continued)

Q. Thank you. I wonder if any one of the panelists can provide me with the information as to the total staff, both medical and non-medical at the Hospital for Sick Children at the relevant time. Do you have that information?
(ANSWERS BY DR. BUEHLER)

A. The entire number of people in the Hospital would be quite large. We know as far as the nursing staff on the wards that there are anywhere from three to five approximately nurses per ward.

Q. I'm sorry, three to five?

A. Approximately. That may vary from night to night. In general there were - are you asking specifically at night?

Q. No, I am sorry. I was looking more to the question of what is the total staff at the Hospital for Sick Children; in other



(ANSWERS BY DR. BUEHLER)

words, how many people are employed by the
Hospital?

A. That would be a very large
number. I don't know, do you?

(ANSWERS BY DR. SMITH)

A. I think we asked and it was
in the thousands, 5 or 6 thousand I think was a
rough figure we were given.

Q. And then do you know amongst
that population how many doctors, residents, interns
and so forth?

A. We do not have category break-
down of the employed population of the Hospital, no.

(ANSWERS BY DR. BUEHLER)

A. I think we did in our initial
conversations ask generally about that. They were
large numbers, I don't recall the specifics.

Q. Large numbers of doctors?

A. Yes. It is a large teaching
Hospital and there are a large number of staff,
physicians, residents, interns and fellows.

Q. Are you talking in excess of
a thousand?

A. If I could take a moment to



(ANSWERS BY DR. BUEHLER)

check my notes.

Q. Sure.

A. According to the notes from our conversations with Dr. Kenneth Rowe on the very first day that we arrived he said there were approximately 350 active staff, approximately 100 full time staff, approximately 180 residents and 70 Fellows. That was the information that we got from Dr. Rowe.

Q. So that the 350 is composed of 100 full time, 180 residents and 70 Fellows, is that right?

A. I believe that 350, although I can't be certain, is somewhat different from each of those other categories. It is not a total, they are separate categories.

Q. So, we may be looking at in fact 700 medical staff, is that your impression? I might mention that the Dubin Report at page 6 indicates, it has just been brought to my attention, over 400 medical staff, 240 house staff and approximately 2800 Hospital employees including 1133 nursing staff.

A. They would probably be



(ANSWERS BY DR. BUEHLER)

including the 180 residents and 70 Fellows, which is about 250 as house staff.

Q. All right.

A. So, that is approximately.

Q. So, the residents, Fellows are the house staff?

A. Yes.

Q. All right. And then the 350 active staff would correspond with the 400 medical staff the Dubin Report is talking about?

A. I am just saying approximately, I don't know exactly how Dubin collected that data.

Q. All right. Now, let me move to another subject and again perhaps focus on Dr. Buehler for a moment. As an epidemiologist, are you familiar with the concept of clustering with respect to certain types of disease.

A. Yes.

Q. Is that something that occurs in epidemiology that you do have clusters of types of disease?

A. I'm not sure I understand your question precisely. We used the term clustering in our report to mean that events seemed



1
2 (ANSWERS BY DR. BUEHLER)

3 to be occurring more often in particular areas or
4 at particular times.

5 Q. Well, let me be more specific
6 then. Are you familiar with the clustering of
7 heart disease in newborns?

8 A. That's getting beyond my
9 expertise.

10 Q. All right.

11 A. Actually, that is asking an
12 expert question that I can't address.

13 Q. Well, let me address your
14 colleagues then. We have heard evidence with
15 respect to the work of Dr. Vera Rose at the Hospital
16 for Sick Children concerning the clustering of
17 congenital heart disease. Are either of your
18 colleagues familiar with that work?

19 A. (Dr. Smith) I am not
20 familiar with it at all.

21 (ANSWERS BY DR. WALLACE)

22 A. I am not familiar with it in
23 detail but I know that Dr. Rose has done some
24 research in this area.

25 Q. Well, is it your understanding
that congenital heart disease may in fact occur in



(ANSWERS BY DR. WALLACE)

clusters?

A. Yes.

Q. And do you understand the reasons for that?

A. Do I personally understand the reasons?

Q. Yes.

A. No. I think this is why there is so much research into it.

Q. I beg your pardon?

A. This is why there is research into this subject.

Q. I see. Dr. Wallace, do I understand that you are an epidemiologist, is that how you would describe yourself?

A. Yes.

Q. So, this subject of the clustering of congenital heart disease, is that something that epidemiologists are looking at?

A. Yes, I think so.

Q. And I take it from what you have just said that it is something that is not fully understood, is that fair?

A. It is not a subject that I



(ANSWERS BY DR. WALLACE)

myself am aware of in great detail.

Q. I take it if it was something that was well known in epidemiology you would at least have a passing acquaintance with it?

A. I know that certain diseases do occur in clusters.

Q. In certain types of congenital heart disease?

A. Yes.

Q. Do you know whether the reasons for that are fully understood?

A. I don't think they are fully understood.

Q. Now, let me ask you if one as an epidemiologist was attempting to design a study to look at the incidents of congenital heart disease in newborns, let us say in the City of Toronto, would that be possible to design that type of study?

(ANSWERS BY MR. KUSIAK)

A. Could you repeat that question again.

Q. Yes. If one was attempting - I'm not sure whether Mr. Kusiak is the witness to



1
2 (ANSWERS BY MR. KUSIAK)

3 whom this is directed but if one as an epidemiologist
4 was attempting to design a study to look at the
5 incidents of congenital heart disease in the City
6 of Toronto, let us say, is that something that
7 could be done, a study could be designed to do that?

8 A. Well, I am not an epidemiologist
9 but from the data sources that I am aware of I think
10 that such a study could be perhaps
11 designed and conducted.

12 Q. Dr. Smith?

13 (ANSWERS BY DR. SMITH)

14 A. Yes, I would like to add
15 something to that. The congenital anomalies
16 register, which is kept federally and fed into by
17 I believe now 9 of 10 provinces would report
18 congenital anomalies in the first week of life to
19 this register. It is computerized and one could
20 retrieve from it data on certain kinds of cardiac
21 anomalies, for example, those that are identified
22 in the first week of life.

23 Q. All right. So, that would
24 be one data source that one might go to?

25 A. Yes.

Q. And presumably that would cover



1
2
3 (ANSWERS BY DR. SMITH)

4 births anywhere in the City of Toronto or indeed
5 anywhere in Canada if you wanted to.

6 A. Anywhere where the register
7 is operating, I believe it is either 8 or 9 of 10
8 provinces.

9 Q. All right. And if one wanted
10 to look beyond the first week of life, in other
11 words, birth defects that are detected after that
12 time, one could also devise as part of the study
13 access to sources of that information.

14 A. I am just not sure how much
15 more information is available on congenital anomalies
16 in the first year of life but the register does
17 cover anomalies in the first week of life. That
18 allows for anomalies obviously that are discovered
19 in the Hospital before the child goes home.

20 Q. All right. But, for example,
21 there may be some children who obviously stay on
22 in hospital as a result of these anomalies which
23 may not be discovered in the first week of life or
24 which, into Hospital after the first week of life
25 and presumably you could access that information
by going to the other hospitals, couldn't you?

A. I do believe that it can be



(ANSWERS BY DR. SMITH)

accessed, yes.

Q. So, the data is there; there may be limitations on what data is available but my point is simply if one is looking at congenital heart disease in the City of Toronto, the sources are there and you could put together a study to do that.

A. That could be done.

Q. All right. Now, as I understand it though your study in this case as focused on the Hospital for Sick Children you did not look at the sort of information we have just been discussing.

A. We did not specifically look at the incidents of congenital anomalies during this period. I might add that this particular information does not become available immediately, that there is a lag time so that, for example, one could retrieve information in 1983 for up to the year before and so on. There is a lag time before it becomes readily available.

Q. All right. Well, you didn't, you say, use the word specifically, as I understand it, you didn't specifically or generally look at



(ANSWERS BY DR. SMITH)

that issue.

A. We did not, yes.

Q. And whether the information itself becomes available a year later or whatever you did not go to hospitals in the Toronto area and attempt to obtain their data?

A. That would not be the way one would do it.

Q. Well, that would be part of the way one would do it I gather.

A. Well, if we wanted to look at the total population of Ontario and look at the incidence of congenital anomalies the one would go the central register where the hospitals send the reports of births that would include whether or not the child had a congenital anomaly and the type of congenital anomaly that was identified.



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(ANSWERS BY DR. SMITH)

Q. Well, I don't want to get into a long argument with you, but presumably you could also go to the original source, the Hospital itself, and say to them "We don't have this data from the central registry. Give us access to your records." That is something that could be done.

A. With unlimited manpower one could do that in a very, very special study, yes.

Q. All right.

Now if one had an epidemic let us say of congenital heart disease in the City of Toronto or let us even say the Province of Ontario, or indeed in the country, would one expect that that epidemic would be reflected particularly in The Hospital for Sick Children serving as it does the catchment area around Toronto?

A. Would you repeat that again, please?

Q. Yes.

If one had an epidemic of congenital heart disease in the City of Toronto and surrounding area, would it be fair to expect that that epidemic would be particularly reflected in admissions at The Hospital for Sick Children?



B.2

1

2

(ANSWERS BY DR.SMITH)

3

A. It might - yes, it could very
4 well be reflected in referrals.

4

5

Q. Yes.

6

A. In referrals. Not necessarily
in mortality.

7

8

9

10

Q. All right. But in referrals
you would expect that the children would be sent to
The Hospital for Sick Children because it presumably
specializes in that field?

11

A. Yes.

12

13

14

15

Q. And indeed you might expect
that what you would have is that the sicker children
would be sent to The Hospital for Sick Children because
the referring hospitals would be less able to cope
with those children?

16

17

18

19

A. Well, yes, I would agree
that The Hospital for Sick Children is a tertiary
care centre and obviously takes care of children
that can't be taken care of elsewhere.

20

21

22

23

24

25

Q. All right.
So I suppose what I am suggesting
to you is that if you do have the type of epidemic
that I am positing, you may well have within that
epidemic a further epidemic or secondary epidemic



B.3

1

2

(ANSWERS BY DR. SMITH)

3

at the Sick Children's Hospital?

4

A. One might have a larger
number of referred patients.

5

6

Q. Would that be fair to describe
it as a secondary epidemic?

7

8

THE COMMISSIONER: I hope the answer
is no, but if the answer is yes I won't know what it
means.

9

10

DR. SMITH: I don't really know what
you mean.

11

12

MR. STRATHY: Q. All right. How
would you describe it then if you have this particular
focussing on the The Hospital for Sick Children?

13

14

A. I would say that the admissions,
the cardiac admissions at the Hospital reflected
referrals from elsewhere, and if there were a higher
number of a certain kind anomalies they would be
referred; that particular rise would be reflected in
the Hospital.

15

16

Q. All right.

17

18

A. Not that it was a secondary
epidemic.

19

20

Q. All right.

21

22

A. It would be a reflection of a

23

24

25



B.4

1

2

(ANSWERS BY DR. SMITH)

3

trend occurring elsewhere.

4

Q. All right. In fact, though,

5

it may be a magnification of the trend in the sense

6

that the more difficult cases would be sent to The

7

Hospital for Sick Children?

8

A. It would not be a magnification

9

of the trend. They might just get a higher number, a

10

Q. Relative - relatively speaking.

11

A. Relative to the total.

12

Q. Just to go back for a moment

13

to this study, do I understand correctly that if one

14

were devising the type of study that I have talked

15

about, you would look not simply at mortality but you

16

would also look at the non-fatal cases. You would

17

look at babies with congenital heart defects that

18

were perhaps - I will use the word "benign" for lack
of a better word?

19

A. I am not sure what you mean.

20

Q. All right.

21

A. Would you ask that again, please?

22

Q. Well, if one were to devise

23

an epidemiological study to look at congenital heart

24

defects in the City of Toronto over a given time

25

period --



B.5

1

2

(ANSWERS BY DR. SMITH)

3

A. Yes.

4

Q. -- as I understand it one

5

6

7

8

9

would look at all types of congenital heart defects and not simply congenital heart defects leading to death. If you wanted to get a proper appraisal of the situation you look at the spectrum and you might not focus in on simply those resulting in deaths. Is that fair?

10

A. It is fair. I mean I agree,

11

but I would like to know what the question is that one is asking in designing the study.

12

13

14

15

16

17

If the question one is asking, "What is the incidence of non-fatal cardiac anomalies?", well, one would go to a register and one could retrieve that information and one could also ask the question "What is the incidence of fatal cardiac anomalies?".

18

Q. But if you are looking at the

19

broad picture you look at both.

20

A. Then one could look at both, yes.

21

Q. Dr. Wallace, I take it you

22

agree with that?

23

A. (Dr. Wallace): Yes.

24

Q. And that would allow you to,

25



B.6

1

2

within that total picture, look at both the non-fatal
and the fatal?

3

4

(ANSWERS BY DR. SMITH)

5

A. That is correct, and - I will
stop there.

6

7

Q. All right, thank you.

8

9

10

I wonder if you could turn to Table 11
and perhaps I could start by addressing my questions
to Dr. Buehler, and the assistance of his colleagues
as they are advised.

11

12

And, Doctor, Category A deaths are
18 in number; is that right?

13

(ANSWERS BY DR. BUEHLER)

14

A. That is correct.

15

16

17

18

19

Q. Let me ask you this: suppose
I was to simply segregate out 11 of those 18 deaths
and look only at those deaths and attempt to deal
with the relative risk of death with respect to the
nurses in question solely with reference to those
11 deaths. Do you follow me so far?

20

A. Yes.

21

22

23

Q. All right. Now obviously with
401 the relative risk would remain the same because
she was there for all 18 in any event; is that right?

24

A. That is correct.

25

26



B.7

1

2

(ANSWERS BY DR. BUEHLER)

3

4

5

6

7

Q 402, if those 11 deaths were 11 out of the 12 for which she was on duty, the relative risk for her, because we are just looking at 11, would also be - and assuming the same hours on duty and the same hours off duty - would also be infinity; is that right?

8

A. You said 11 of the 12?

9

10

11

12

Q Well, let's say that the 11 that we are looking at are the 11 that 402 was on. And let us separate aside and put it to one side the other one that 402 was on.

13

14

15

A. Okay. That would depend on whether or not those 11 for which 402 was on - oh, I understand your question.

16

17

18

19

Q Do you follow me?

A. Yes. Okay. In that event for those 11 deaths you are correct.

20

21

22

23

24

25

Q And I gather, Dr. Wallace and Dr. Smith, that is so?

A. (Dr. Smith): That is correct.

Q And then again we could do the same exercise with 403 and 404 that if we are talking about the 11 for which they were on, for which they were on and they were both on for 11, the answer would be the same?



B.8

1

2

(ANSWERS BY DR. BUEHLER)

3

4

A. You are looking at the night shift or the total?

5

Q. Sorry. The night shift.

6

A. Yes. They were each there for 11 during the night shift.

7

8

9

10

Q. And if we were looking at Nurse 403's 11 and she was on for all 11, the answer would be the same, the relative risk would also be infinity?

11

12

A. Right. You might have to select a different 11.

13

Q. Oh, quite so. I understand that.

14

A. Yes.

15

16

Q. But if the 11 that one is looking at were all the 11 that the 403 was on, it would be infinity?

17

A. That is correct.

18

Q. The same for 404; is that right?

19

A. That is correct.

20

Q. All right.

21

Now let us then take - let us suppose we are looking at 8 deaths. Presumably again 401 remains at infinity?

22

23

A. Correct.

24

25



B.9

1

2

(ANSWERS BY DR. BUEHLER)

3

4

5

Q And if we turn to 402, if we
are talking about 8 of the 8 for which she was
present, then she too is infinity?

6

THE COMMISSIONER: 12.

7

DR. BUEHLER: 8 would be out of the 12.

8

MR. STRATHY: Q Yes. Excuse me.

9

A Yes.

10

11

Q But if we are separating - yes,
excuse me. If we are taking 12 and saying within
those 12 the 8 that we are looking at --

12

A Right.

13

Q -- were matched with 402, she
is also infinity?

14

A That is correct, yes.

15

16

17

18

Q And if we were to say that of
those 8 with respect to 402 she was on for 7 and off
for 1, we would have 7 in the deaths on duty column
and 1 in the deaths off duty column; is that right?

19

A (Dr. Smith): Are we referring to
any particular code now, 401, 402?

20

21

Q No, I am sorry, we are looking
at 402.

22

A (Dr. Smith): 402.

23

24

25

Q And we are still looking at 8



B.10

1

2

deaths but we say that 402 was on duty for 7 of them?

3

(ANSWERS BY DR. BUEHLER)

4

A. Yes.

5

Q And off duty for one of them,

6

that puts 7 in the deaths on duty column and one in
the deaths off duty column?

7

A. That is correct, yes.

8

Q So her relative risk would no

9

longer be infinity, but it would be a relatively

10

speaking higher risk. Is that fair?

11

A. It would be the quantity of 7

12

divided by 635.5, all divided by the quantity of 1

13

divided by 2000 and two hundred - two thousand, six,

14

et cetera.

15

Q And the --

16

A. I wouldn't care to venture

17

what that would be approximately in my head, but it

18

would be less than infinity but it would be a
relatively large relative risk.

19

Q Okay. 7 divided by 635.5

20

over 1 divided by 2664.5?

21

A. Correct.

22

Q And you would agree with me as

23

you say that would be a relatively high relative risk?

24

A. Yes.

25



B.11

1

2

(ANSWERS BY DR. BUEHLER)

3

Q. And we can --

4

A. I wouldn't venture to do the
arithmetic in my head right now.

5

6

Q. We can do the same exercise
if we say that 402 is there for 6 of the 8; it is
simply a change in the calculation?

7

8

A. That is correct, yes.

9

10

11

12

Q. And would you agree with me
that if we are talking of 7 of the 8 or 6 of the 8 it
would in either case have the effect of bringing the
relative risk substantially higher than it presently
is?

13

14

15

A. If you looked at 7 of the 8 and
then you looked at 6 of the 8, the relative risk
would come down for those 8.

16

Q. Yes.

17

A. All right.

18

19

Q. But the relative risk, and I
am just using this hypothetically.

20

A. Yes.

21

Q. Is 12.6 at present with respect
to 402?

22

A. Yes.

23

Q. And if we change the numbers

24

25



B.12

1

2

(ANSWERS BY DR. BUEHLER)

3

around as we have just done, I do understand that that
would increase that relative risk and we can do the
calculation but I assume it would be higher?

5

Dr. Wallace is nodding her head.

6

7

A. Yes, that is correct. The
ratio of 7 over 1 would be greater than the ratio of
12 over 4.

8

9

Q. All right.

10

11

Now if one were to take, and let us
continue with the 8 proposition, if one were to take
that Nurse 402 was on for 6 of those 8, and Nurse 403
was on for the other 2 of those 8 - do you follow me?

12

13

14

A. One is on for 6 and one was on
for another 2.

15

16

Q. For the other 2.

17

A. Yes.

18

Q. Not 2 of the 6 but 2 of the 8
for which 402 was not on?

19

A. Okay.

20

Q. Are you with me?

21

A. Yes.

22

Q. Would I be correct in under-
standing that between the two of them, 402 and 403
were on for 8 of 8 obviously?

23

24

25



B.13

1

2

(ANSWERS BY DR. BUEHLER)

3

A. Correct.

4

Q. And would it also be accurate

5

that the relative risk of both 402 and 403 in tandem
would be infinity?

6

A. If you were looking at this in

7

terms of pairs, that is correct, because you would

8

have 8 in your numerator and 0 in your denominator.

9

Q. Thank you.

10

Just perhaps a question for Mr. Kusiak.

11

Do I understand correctly that the statistical

12

significance of an association may be less depending

13

on the size of the sample that one is looking at?

(ANSWERS BY MR. KUSIAK)

14

A. That is true. The smaller that

15

in this instance if there were fewer babies in the

16

sample or in this population that died, the signifi-

17

cance of any particular relative risk would be

18

decreased.

19

Q. All right. So the exercise --

20

A. I am sorry, you wouldn't be as

confident in your result.

21

Q. I understand that.

22

A. That is what I meant.

23

Q. That is why obviously people in

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B.14

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(ANSWERS BY MR. KUSIAK)

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the polling business and so on, and I guess presumably
4 people in the statistical business too, try and have
5 relatively large samples?

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A. There are a lot of problems
that are alleviated by having large numbers, yes.

8

9

Q. And the main thing is you can
have greater confidence in the statistical significance
of your result?

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A. That is one of the important -
that is probably one of the principal reasons for doing
that sort of thing.

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Q. So if we go through this
exercise that I have just taken your colleagues through
and reduced the number of deaths, I take it you would
agree you would have less confidence in the statistical
significance of the results?

17

A. Absolutely true.

18

Q. Thank you.

19

20

Now incidentally, Dr. Buehler, did
your team look at any association between - excuse me,
let me step back a moment.

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Were you all aware that in this
particular ward individual nurses were assigned to
individual patients?

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B.15

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(ANSWERS BY DR. BUEHLER)

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A. Yes, we were aware of that.

4

Q. Were you aware then that each

5

evening, for example, each nurse would be told, all

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right, you are in charge of Babies A, B and C in Room

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418, and you are in charge of Babies D, E, F in Room

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403, that type of thing?

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(ANSWERS BY DR. BUEHLER)

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A. We didn't know exactly how the logistics of that worked. We knew in general nurses were assigned to specific patients.

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Q. That was nurses apart from the team leader who had overall responsibility, was that your understanding?

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A. Yes. And our understanding was that if the nursing -- if there were relatively fewer nurses on a particular shift that sometimes the team leader would be assigned patients, but in general the team leader was not, it just depended on the staffing nine to nine.

14

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16

Q. Did you do anything in the way of your study to look at any association between the nurse in charge of children and the deaths of those children, is that something you looked at?

17

18

A. The individual nurse assigned to individual patients?

19

Q. Yes.

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A. In the Death/Death Comparison Study we had information on which nurses administered medications, and our understanding was that in general the nurses who were responsible for caring for patients administered the medications, with the



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(ANSWERS BY DR. BUEHLER)

exception of the RNA in certain instances, and I think that has already come up. Also in the comparison of patients who died to their surviving roommates --

Q. Well, let me interrupt you, is there anything in your results which reflects an analysis of babies who died, and the association between those babies and the nurse who was caring for them at the time?

A. We didn't present those statistics in our results, but we did not see a pattern similar to the one that we observed.

Q. You had that information available though, did you?

A. Yes, that is correct.

Q. That is something you looked at?

A. To the extent that the nurses who administered medication were the ones assigned to the patient.

Q. So in fact you really did not look specifically at the question that I asked you, that it may well be that the nurse administering medication was not in fact the nurse assigned to the



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(ANSWERS BY DR. BUEHLER)

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child?

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A. That is correct, although our understanding is that in general the nurse administering medication is the one who was assigned to that particular child.

Q. Well it was my understanding that except for certain routine medications the doctors had to administer anything by needle?

A. We state that in our report.

Q. Yes.

A. That for intravenous medications the routine was for doctors to administer those.

Q. And the other medications would be sort of routine oral doses of things given by nurses?

A. The way it was -- as I recall the way it was signed off in the medication sheets is that the nurse who prepared the dose wrote in the chart which doctor gave it.

Q. Is that where you got your information on this subject from the medication sheets?

A. We got the medication sheets



C4

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(ANSWERS BY DR. BUEHLER)

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in the patient charts.

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Q. You took this information concerning administration of medication from the medication sheets?

6

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A. Yes, each patient chart had a medication sheet, every dose of medicine that a child is given is supposed to be documented on the patient's chart.

10

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Q. Was the purpose of your investigation to determine whether there was any association between ^{the} person administering medication and death?

14

15

16

A. That was part of the general Death/Death comparison Study. Yes, in the context of that particular part of the study.

17

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Q. I suppose if one wanted to do a more specific study on the point I am talking about, one could look at the assignment book and with reference to the assignment book do a study concerning the nurse assigned to the child and death?

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A. Yes, that is correct, and we did not do that type of study.

Q. And the results obviously may be different from the findings in the study you



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(ANSWERS BY DR. BUEHLER)

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did do?

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(ANSWERS BY DR. WALLACE)

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A. They would be different

because we know in some of the deaths -- well, we
looked at all of the nurses on duty, and clearly
all the nurses on duty were not taking care of each
patient, so you are correct.

Q. A question perhaps for
Dr. Wallace. In your curriculum vitae you make
reference to - that is Exhibit 320, Item 6 on
the second page - your participation in an investiga-
tion of unexplained illnesses and death at The
Hospital for Sick Children in January 1982.

"Medication Errors with Inhalant
Epinephrine Mimicking and Epidemic
of Neonatal Sepsis".

Now, can I ask you first, did the
CDC have any involvement in that study?

A. Yes, they did.

Q. Was it done under the auspices
of the CDC?

A. It was another joint investi-
gation.

Q. I am sorry?



C6

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(ANSWERS BY DR. WALLACE)

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A. It was a joint investigation.

4

Q. Between whom?

5

A. Between the CDC, the

6

Laboratory Centre for Disease Control and the Hospital.

7

Q. And did that study result
in any written report?

8

A. A report was sent to the

9

Hospital at the end of the study, yes, and also the
investigation has been published in the New England
Journal of Medicine.

11

12

Q. And were you involved in a
detailed way with that study?

13

14

A. I was involved in the
investigation, yes.

15

16

Q. Now, there is a report on it
in the Dubin Report, there is mention of it in the
Dubin Report.

17

18

A. I have not read the Dubin
Report.

19

20

Q. That is good because you
can tell us firsthand what happened, can you tell us
briefly what happened in that?

21

22

23

A. In January of 1982 it was
realized by the physicians in the Neonatal Intensive

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C7

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(ANSWERS BY DR. WALLACE)

3

Care Ward, Ward 7F, certain children had come down
4 with an illness for which they could find no cause.
5 As the title of the article says it was initially
6 thought that these children were suffering from
7 Neonatal Sepsis, namely necrotizing enterocolitis
8 and they were all transferred back to the Intensive
9 Care Ward. Ward 7F was evacuated and we were asked
10 to try and come up with an explanation for this
unusual occurrence.

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After exploring many routes we
found in the medication cupboard in Ward 7F a
bottle of Inhalant Epinephrine and this was in
close proximity to a bottle of Vitamin E. Both
drugs are produced by the same company and come
in similar bottles with very similar labels. From
the specimens that had been taken of the gastric
aspirates of these babies early on in their illness,
after they were sent to the National Institute of
Health in Bethesda, Maryland, they were able to
identify Epinephrine, and we concluded that this
outbreak of illness was due to a medication error.

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Q. So obviously instead of
giving the babies Vitamin E they were given
Epinephrine?



C8

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(ANSWERS BY DR. WALLACE)

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A. Yes.

4

Q. And Vitamin E is something
that is given regularly I take it in the neonatal
ICU?

5

6

A. That is correct.

7

8

Q. Do I understand then that
you were on the scene very soon after this problem
was discovered?

9

10

A. I think about six weeks
after the outbreak began, yes.

11

12

Q. How soon after the ward was
evacuated did you come on the job?

13

14

A. I can't recall exactly, I
think within four or five days.

15

16

Q. Is that something that one
tries to do as an epidemiologist, is there an
obvious advantage to being on the scene as soon as
the epidemic is discovered?

17

18

19

A. Yes, indeed.

20

Q. So you don't describe yourselves
as detectives, but like any detective you like to be
there while the evidence is fresh?

21

22

A. Yes.

23

Q. Now you mentioned a certain

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C9

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(ANSWERS BY DR. WALLACE)

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number of children involved; how many children was

4

it determined had this administration?

5

A. I have difficulty remembering the details of this. Do you by any chance have the article?

6

7

Q. I don't have the article.

8

THE COMMISSIONER: We have the Dubin Report, and there is a chapter on it, would that help?

10

11

DR. WALLACE: Yes, please. This happened quite some time ago. I think the number was seven.

12

13

MR. STRATHY: Q. Seven?

14

A. Yes.

15

THE COMMISSIONER: Is it Chapter 13?

16

MR. STRATHY: Chapter 13 is the chapter dealing with Jonathan Murphy.

17

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THE COMMISSIONER: That is the incident, is it not? It was five infants in three different rooms in Neonatal Ward 7F.

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(ANSWERS BY DR. WALLACE)

A. I'm sorry, which page are we on?

Q. I'm sorry, it is page 177.

A. I would have refreshed my memory if I had anticipated these questions.

Q. Well, I should have warned you.

The first line of that chapter indicates early in January 1982 five infants in three different rooms in Neonatal Ward 7F exhibited similar symptoms of illness.

Now, I suppose my question to you, having participated in the study itself, do you recall how many infants it was eventually determined had this problem. Was it five or was it more than five?

A. As I recall we devised the cases up to definite cases and probable cases and I can't recall the exact numbers but I think it was five definite cases.

Q. Five definite and then I take it in addition to the five definite there was some probable did you say?

A. Yes. The clinical condition



(ANSWERS BY DR. WALLACE)

presented by these babies was very complex and it was decided to make the case definition based on certain findings and where some babies had only some of these findings we called them probable cases.

Q. So, it is not dissimilar to the sort of thing you have done here I take it in the report itself that we are dealing with, your CDC report; in other words, you looked at categories didn't you?

A. Yes.

Q. You looked at A's and B's, shall we say?

A. We had a strict case definition in the first investigation.

Q. So, in this epinephrine problem you are telling us you had five definites and...

A. I can't recall the exact numbers of probables.

Q. All right.

A. If I had the article I could give it to you.

Q. Well, that's all right. Five



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(ANSWERS BY DR. WALLACE)

definites and some probables.

A. Yes.

Q. Now, did you determine how many nurses had made this error?

A. I can't recall the number of nurses who had made this error. There was more than one nurse.

Q. Yes. More than one. Do you remember whether there was more than two?

A. More than two, yes.

Q. I guess more than two but beyond that you can't help us too much?

A. Well, some nurses were assigned to more than one baby. I can't recall the numbers of nurses who were assigned to more than one baby.

Q. So, at least three nurses made a similar sort of error?

A. Yes.

Q. Resulting in serious sickness of at least five and perhaps more babies?

A. That is correct.

Q. And the error was made because two bottles of the drugs looked alike.



(ANSWERS BY DR. WALLACE)

A. Yes.

Q. Was the inhalant epinephrine
supposed to be in the location where it was?

A. No, it was a drug that was
very rarely used on that ward.

Q. So, it is something that
a nurse reaching for a bottle would not expect to
find?

A. That is true.

Q. As I understand it epinephrine
is adrenaline?

A. Yes.

Q. And the inhalant is something,
what, it is a liquid that is used to be inhaled,
is it?

A. Yes, it is used to prevent
bronchial spasm when you excubate a baby. It is
not meant to be taken orally.

Q. So, a nurse reaching for this
particular bottle in the ward would not expect to
be picking up a bottle of this inhalant epinephrine?

A. That is correct.

Q. But there is no suggestion
that the nurses reaching for this bottle were under



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(ANSWERS BY DR. WALLACE)

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sort of stress or strain or rush, they were simply
4 looking for Vitamin E which is as regular as the
5 daily orange juice, sort of thing, isn't it?

6

A. Well, I don't think I can
7 answer to the mental state of the nurses at the
8 time they were doing that.

8

9

Q. Well, that is fair but am I
10 not correct that Vitamin E is not an emergency
11 medication, it is a routine sort of medication?

10

11

A. That is correct.

12

13

Q. Well, aren't nurses supposed
14 to check all medication before they administer
15 them?

14

15

A. I think everyone who administers
16 medication should check the labels, yes.

16

17

Q. They are supposed to look at
18 the label itself and in some cases even show it to
19 someone else, aren't they?

18

19

A. That is correct.

20

21

Q. Well, how is it then that
22 three independent nurses, presumably qualified
23 nurses could make this sort of mistake?

22

23

A. You are asking me to speculate
24 I'm not sure I want to.

24

25

D5



(ANSWERS BY DR. WALLACE)

Q. Well, as I understand it medication errors are within the bailiwick of an epidemiologist and we've got you as a home-grown epidemiologist, so, it is our best shot at an opinion. How does it happen?

A. How does any accident happen?
I mean...

Q. Well, how does it happen with three qualified people in a short period of time apparently under no stress conditions?

A. Well, it was a very busy ward. I wouldn't say they were under no stress conditions.

Q. Is that something that in your experience as an epidemiologist contributes to errors?

A. Yes.

Q. Busyness?

A. Yes.

Q. Under-staffing?

A. Under-staffing.

Q. As an epidemiologist are you familiar with the effect of the lack of sleep on errors?



D7
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3 (ANSWERS BY DR. WALLACE)

4 A. I can't recall any specific
5 studies on lack of sleep but having suffered from
6 lack of sleep myself on many occasions I would say
yes it adds to one's stress.

7 Q. Are you familiar with studies
8 of errors of people who work at night?

9 A. I have no personal knowledge
10 of these studies.

11 Q. Well, as an epidemiologist
12 would you expect that there may well be more errors
13 committed by people working at night than there
would be people during the daytime?

14 A. It is possible but I can't
15 say with assurance.

16 Q. But in any event you would
17 agree I take it that people working in a stressful,
18 rushed situation under strain are more prone to
making medication errors?

19 A. In general I think that is
20 true.

21 Q. Thank you. Did any of these
22 babies that you looked at die? I believe Jonathan
23 Murphy was the only one.

24 THE COMMISSIONER: Yes, the only one.
25



(ANSWERS BY DR. WALLACE)

MR. STRATHY: Q. Was he the only one that died?

A. He was the only one that I personally know to have died during the epidemic.

Q. I take it the others, at least four of the others became quite ill.

A. They became very ill.

Q. Close to death.

A. Perhaps the attending physicians would be better to answer that question.

Q. In any event, very seriously ill?

A. Yes.

Q. And I gather that these conditions that the children suffered from mimicked septus, is that correct?

A. Yes, that is correct.

Q. It was very difficult to tell one from the other?

A. Yes.

Q. How did you discover the epinephrine bottle?

A. We made an inventory of the contents of the medication cupboard and simply found



(ANSWERS BY DR. WALLACE)

it there.

Q. And I take it you were able to find it because you got there relatively close to the time and if you didn't get there relatively close to the time you might not have found it. It might have been removed innocently, that is all I am suggesting.

A. That is a possibility.

Q. And if you hadn't found that bottle of epinephrine it might have been at least more difficult to track the source?

A. That is correct.

Q. Thank you. Now, I will just state one further area that I wanted to pursue with Dr. Buehler. You have talked in your report about association and I think we have canvassed that subject quite fully but just one further area on this matter of association.

Am I correct in understanding that the association between Nurse 401 and indeed all the other members of her team may be explained by some man or woman taking advantage of the presence of Nurse 401 and indeed her team on that particular floor at the time of these particular deaths to gain



(ANSWERS BY DR. BUEHLER)

access to that floor and indeed to do something
untowards to some number of these babies?

A. Let me try and dissect your
question. If someone else were committing a
medication error, be it accidental or intentional,
and we're doing it at times that mimick, if you
will, or were identical to Nurse 401's schedule,
Table 11 would appear very similar if not exactly
the same as it does right now.

Q. Quite so. So that some man
or woman gaining access to that ward and taking
advantage of the presence of Nurse 401 on the
ward to do something, and let me posit to you
something untoward would explain that table.

A. I just answered the question
yes before, you asked it twice I think.

MR. STRATHY: Thank you. Thank you,
Mr. Commissioner.

THE COMMISSIONER: Thank you,
Mr. Strathy. Mr. Lamek?

RE-DIRECT EXAMINATION BY MR. LAMEK:

Q. A few things if I may arising
out of certain matters raised in cross-examination.
You will recall that when Ms. Symes was asking



D11 1
2 questions of you, and this, Mr. Commissioner, is
3 found at Volume 91 of the transcript at pages 520
4 to 521. She referred you to a passage in the
5 middle of page 4 of the Haynes review of your
6 report, page numbered Arabic iv and Ms. Symes read
7 a passage from the large paragraph in the middle
8 of that page. Dr. Buehler pointed out to her that
9 she had not read the whole of the paragraph and
10 Ms. Symes agreed with him that she had not but did
not do so.

11 Was there something in the balance
12 of that paragraph, Dr. Buehler, that you think in
13 some way bears upon the passage that was read and
14 put to you?

(ANSWERS BY DR. BUEHLER)

15 A. Yes.

16 Q. And what was it, please?

17 A. After discussing potential
18 problems with different types of statistical
19 analyses, Dr. Haynes and Dr. Taylor at the end of
20 the paragraph state:

21 "It should also be stated that doing
22 more sophisticated analyses will not
23 necessarily..."

24 And they have underlined the word "necessarily".
25



(ANSWERS BY DR. BUEHLER)

"...change the conclusions, that any really strong association is unlikely to disappear with multivariate techniques and that a partial adjustment to avoid over-interpretation of the univariate analyses in the report can be achieved by accepting as statistically significant only those associations that are highly statistically significant, say, P less than 0.04."

Q. I suppose that will speak for itself. What do you understand the authors of this review to be saying? This follows that discussion of the univariate and multivariate analytical techniques that I had such trouble following but I understand there was a difference of you between the reviewers of your report and the authors of your report on that question, and I will come back to that.

But what is the significance of the final sentence which you have now just read to us, why did you want it read?

A. I think that there is a point



1
2 (ANSWERS BY DR. BUEHLER)

3 to be made in stating the concerns that Dr. Haynes
4 and Dr. Taylor had. They make several points and
5 I felt it was important that all of their comments
6 with respect to statistical methods be raised.

7 Q. Okay. Which of your
8 associations would fall into that group which
9 he calls highly statistically significant and
10 say P less than 0.01 and which he would therefore
11 regard, or they would therefore regard as containing
12 a partial adjustment to avoid over-interpretation
of the univariate analyses in the report?

13 A. There was one particular
14 finding that deals with the time of death and/or
15 the time of onset of terminal events.

16 Q. Yes.

17 A. And that finding had that
18 level of statistical significance.

19 Q. I'm sorry, that finding in
20 what regard?

21 A. In terms of how children who
22 died during the epidemic period differed from
23 children who died at the non-epidemic period.

24 Q. Okay. Time of day or night
25 then, that clustering there would be such a finding?



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(ANSWERS BY DR. BUEHLER)

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A. Yes, this clustering during
this particular six-hour period.

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(ANSWERS BY DR. BUEHLER)

A. If you look at Table 4, and in this table we are looking at all ward associated deaths, you may recall that -- I'm sorry, all cardiology associated deaths or cardiac population deaths which includes both ward associated and OR associated, of all of the cardiology associated deaths during the epidemic period there was a disproportionate number of those deaths that occurred on the cardiology wards, and that finding had a degree of statistical significance and that finding had a probability less than 0.01.

Q. I take it we can do the exercise for ourselves because you have identified the probability in the case of each of the findings, have you not? So we can identify those for which even the authors of the review would say there had been a partial adjustment by the measure of probability attached to the finding?

A. We could go through it page by page.

Q. Yes. On the question now of the use of univariate or multivariate analytical techniques, did you consider the use of multivariate techniques in approaching these data that you accumulated?



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(ANSWERS BY DR. BUEHLER)

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A. Yes, we did.

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Q. And can you tell me why you
did not use multivariate techniques?

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A. I think I could best answer
that by stepping through each of several of the
different sections where that issue has been raised.

7

8

Q. Right.

9

10

A. In the first section the
question of mortality rates on the cardiology ward:
I believe on the first day of testimony I mentioned
that we looked at length at ways in which we could
get good information to characterize the patient
days that we used as our denominator in terms of
age or severity or possibly operative status.

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We looked at great length at
different types of data sources and were unable to
identify within the Hospital a way that we could
reliably use to stratify or subdivide, whatever
word you care to use, the patient day denominator
in terms of taking multiple variables into account
in calculation of mortality rates.

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In the next part of the study the
characteristics of the ward population or character-
istics of the type of care provided, we looked at



E3 1
2 (ANSWERS BY DR. BUEHLER)
3 data from a variety of different sources and
4 different departments in the Hospital, and if
5 further amplification of the explanation to this
6 is needed I will defer to Mr. Kusiak, but let it
7 be said that using data that is collected in that way
8 it would not be possible to consider all of those
9 different things using a single multivariate
technique.

10 In terms of the comparison of
11 deaths during the epidemic period to deaths at
12 other times, we could have used multivariate
13 techniques in that the data that we collected would
14 have lent themselves to a more sophisticated
analysis.

15 I think a striking finding in that
16 study was -- one of the findings to which we attach
17 great importance if not the most importance is the
18 clustering of deaths during midnight to 6:00 a.m.
19 And as we reviewed our findings and reviewed our
20 data, and as we were looking at the date we would
21 like to submit our report, we felt that performing
22 a more sophisticated analyses really would have
23 been very unlikely to yield a substantially different
results.

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(ANSWERS BY DR. BUEHLER)

In terms of the comparison of children who died to their surviving roommates, again we attempted to take nursing time required for care into account. In other words, look at more than one variable. When you take something into account in a sense you are performing a multivariate analysis.

However in that situation, as we mention in the report, there were relatively few surviving roommates who required less nursing time, and when Mr. Kusiak attempted to perform that type of analysis it simply wasn't possible to do.

Q. If I understand you in some cases it was a case of election not to use multivariate analytical techniques; in other cases the data and the form of the data or the extent of the data didn't permit the use of multivariate techniques?

A. In most cases it was the latter.

Q. All right.

Do you have any view as to whether the validity of your analyses and the reliability of your findings is impaired by the use of univariate analyses?



E5

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(ANSWERS BY DR. BUEHLER)

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A. I think the major findings of the death/death comparison where that is an issue stands regardless of the sophistication of the statistical techniques you use to evaluate that.

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Q. One other matter raised by Ms. Symes, and this is found, Mr. Commissioner, in Volume 91, beginning at page 531, went to the question of whether the team had formulated an hypothesis which they then proceeded to test.

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15

I think Dr. Smith's short form epidemiology for morons that was given to me came back to haunt her because you said in that one of the steps was "formulate an hypothesis", and Ms. Symes asked you whether you had done so, and I don't think there was a clear answer to that.

16

17

I don't see anything in the report that is labelled "hypothesis: let's test this".

18

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Am I correct in understanding, though, that each of the various studies or sub-enquiries that you performed was in effect the testing of an hypothesis?

21

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(ANSWERS BY DR. SMITH)

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A. That is correct. Every time a study was performed we were asking certain



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(ANSWERS BY DR. SMITH)

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questions. And in fact we were asking are there

4

differences between this and that, and those were

5

our questions; those were our hypotheses.

6

Q. The question is implicit
in the inquiry that you undertake?

7

A. Yes, it is implicit.

8

A. (Dr. Buehler) May I simply

9

add --

10

Q. Yes.

11

(ANSWERS BY DR. BUEHLER)

12

A. I think the hypothesis is
implicit in the question.

13

14

Q. I'm sorry, did I say something
else?

15

A. I think you stated it the

16

other way.

17

Q. I'm sorry. Forgive me. Of

18

course, that is right. The hypothesis is implicit
in the question.

19

20

As I read the transcript of yester-
day afternoon, and as you know I was not here, and

21

I am thinking particularly, Mr. Commissioner, of

22

pages 708-9 and page 742, when Mr. Tobias and

23

Mr. Shanahan were asking you questions, in particular

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(ANSWERS BY DR. BUEHLER)

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about the recommendations contained on page 28 of
your report, it seems that the suggestion was being
made that the Hospital on the basis of information
then available to it could have identified this
epidemic problem as early as the fall of 1980.

7

8

9

Was that the impression -- did you
share that impression that I have from the questions
asked of you yesterday that was being suggested to you?

10

11

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A. I am not certain if he was
so specific as to say the fall. I would have to
double check.

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Q. All right.

A. I don't know if he used
the word "fall" or "sooner".

Q. Well it may not be important.
Let's canvass the question this way because it goes
to the capacity of the Hospital to recognize that
something may have been amiss which was certainly the
issue that was being addressed.

Could we look, please, at your
Figure 3.

Now these are statistics accumulated
by quarter. They are rates expressed by quarter.

A. Actually it is both the rate



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(ANSWERS BY DR. BUEHLER)

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and the number.

4

Q. And the number, that is right.

5

The two are on the same graph.

6

The third segment in the 1980 slot
on the bottom of the graph, the third segment is
the segment from July 1 to September 30.

8

A. Correct.

9

Q. Certainly there is a peak
in that period. Are you aware that the increase
in mortality on the wards was something which
cardiologists in the Hospital became aware of during
the course of those two months, July and August?

13

A. I don't recall the specific
time that they first sensed a problem. I am aware,
however, that they did meet sometime during the
latter part of 1981 and -- I'm sorry, 1980 -- because
of the concern about increasing deaths.

18

Q. All right. Then if I can
read this aright, during the next quarter the rates
and the numbers drop from 11 down to 7. Do I
understand that correctly?

21

A. For Ward 4A.

22

Q. For Ward 4A, and there is
an increase from 1 to 2 on Ward 4B.

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(ANSWERS BY DR. BUEHLER)

A. Correct.

Q. Had the Hospital looked at the numbers as of, let's say October or November, what could or should it have seen in an epidemiological sense, and I recognize that calls for some speculation, but what were the data which you would regard as epidemiologically significant as viewed from October or November?

A. Well, these numbers are for the period October, November, December. I don't recall --

Q. That is the last quarter, the 7 and the 2?

A. Yes. I don't recall how the 7 and 2 split out by individual months, but if --

Q. The majority were in the month of December. I think really there were five deaths in December.

A. If that is correct then the perception would have been if they were comparing 11 to fewer in October and November that there would -- it would appear there was a downward trend.

Q. Can we look at it another way? Your figures are compiled by quarter.



1
E10 2 (ANSWERS BY DR. BUEHLER)

3 A. That is correct.

4 Q. On an ongoing basis the
5 deaths as I recall it were 5 in July, 5 in August,
6 2 in September, I believe 1 or 2 in October; same
7 small number in November and up again in December to
8 5.

9 Looking at it on an ongoing basis
10 rather than plotting it in retrospect by quarters,
11 and considering the apparent decline in numbers in
12 September, October, would the peak that is shown
13 for July and August have had any epidemiological
14 or statistical significance in your view?

15 A. I think the peak in July,
16 August and September or if it were broken down by
17 individual months, given -- well, since this is
18 for three months, let's consider it that way.

19 Q. All right.

20 A. Given what appears to be
21 a background pattern of 1 to 4 deaths per quarter,
22 the fact that there was a total of 11 on 4A and 2
23 plus 1, 14 actually during that three months --

24 THE COMMISSIONER: 12, is it?

25 MR. LAMEK: 12, I believe --

A. I'm sorry, I am reading the



1
E11 2 (ANSWERS BY DR. BUEHLER)

3 graph incorrectly. 11 plus 1. 12.

4 That is a large increase whether
5 you look at it in terms of a rate or in terms of
6 simply the number of deaths.

7 Having not performed a statistical
8 test comparing that three-month interval to earlier
9 periods, I couldn't tell you whether or not that
10 was a statistically significant increase for that
11 three-month period. I think it is, looking at the
12 picture, something that you would notice visually,
however.

13 Q. Okay. Now this may be a
14 question that you, Dr. Buehler, may not feel free
15 to even attempt to answer and perhaps Drs. Smith
and Wallace may be prepared to do it.

16 Considering that the staff
17 cardiologists concerned with the problem were
18 clinicians and not epidemiologists and not statisti-
19 cians, and considering that over the course of
20 September, October, November, the apparent burst in
21 the mortality rate had declined, could you comment
22 upon the question that was suggested yesterday that
23 the Hospital might have observed this epidemic
pattern in the fall of 1980?

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E12

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(ANSWERS BY DR. SMITH)

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A. I think in looking at the
graph it is possible that the rise certainly could
have been observed, but as clinicians I speculate
that they would probably look at it in a clinical
perspective and try to explain it in some clinical --

Q. Clinical terms.

A. -- in clinical terms, yes.
Not epidemiologic terms.

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Q. Do you agree with that,

Dr. Wallace?

A. (Dr. Wallace): I would concur with that, especially as the babies who died had different autopsy findings.

Q. There is something I do want to clear up because it has occurred and re-occurred in the course of cross-examination. That is the scope of your inquiry with respect to association between death and Hospital personnel. You have repeatedly said over the course of the past two or three days, and I refer for example, Mr. Commissioner, to page 772 yesterday, that you looked at information about Hospital personnel other than doctors and nurses, at some point in time obviously you narrowed the gauge to doctors and nurses, and then perhaps even more narrowly to nurses. Can you please tell me clearly why closer investigation of the non-medical personnel, and I am including nurses and medical now, the non-doctors and nurses. why closer investigation of those personnel was not pursued to the point that the investigation of even doctors and subsequently nurses was pursued?

A. (Dr. Buehler): There is two parts to that answer. The first part is somewhat easier to



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(ANSWERS BY DR. BUEHLER)

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address. That deals with our understanding of the

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times that certain non-medical personnel were there.

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Q. Yes.

6

A. Our understanding of the time

7

that children suffering terminal events, and our

8

understanding of the interpretations that Dr. Kauffman

9

provided for us.

10

The second part to that question is

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one that is more difficult to address, and is in the

12

realm of speculation. In any epidemiologic investi-

13

gation one of the criterion that you use to evaluate

14

your results is the issue in most cases of biologic

15

plausibility. In this investigation it is very

16

difficult to define the concept of biologic plausibility

17

given the nature of some of our findings, and it

18

clearly is a problem that is at the interface of

19

distinguishing between the appropriate limits of

20

epidemiologic versus another type of investigation.

21

Q. With respect to the first

22

part of that answer; do I understand it, I will put

23

it this way, that on the facts as you knew them,

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including the opinions expressed to you by Dr. Kauffman

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as to the likely critical periods for administration

of drug doses, and including the working schedules of



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(ANSWERS BY DR. BUEHLER)

the non-doctor/nurse personnel, that there was no recorded or expected presence of such persons on the ward at the critical times?

A. Our understanding was that certain types of personnel routinely finished their schedules at approximately ten or eleven at night.

Q. That is right.

A. Others routinely visited the ward at about midnight, but it is certainly true that other people from elsewhere in the Hospital could have visited the Hospital, and we would not have the information about their comings and goings.

Q. I want to come to those other people later because that has also been canvassed. As far as the people who at certain times of the day or evening were on the ward, and quite properly so, ward clerks, laundry people, garbagemen, all those people, the hours of their duty and the hours which have been identified to you by Dr. Kauffman as being the important hours in terms of probable administration of overdoses, did not coincide, did they?

A. If you look at the 4 deaths for whom digoxin was inappropriately present in post mortem tissues, that is correct. As best we could



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(ANSWERS BY DR. BUEHLER)

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understand the comings and goings of those type of
personnel.

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Q. I of course stated it too
widely, there were some deaths where the time of death,
and therefore if there were administration, time of
probable administration, may well have occurred within
the normal course of duty of these ancillary personnel?

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A. That is correct.

10

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Q. For the vast majority of the
deaths that was not so?

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MR. STRATHY: Well, Mr. Commissioner,
I suppose there is a limit to what Commission counsel
should be doing in the way of cross-examination of
his own witness. I would have thought especially in
reply, or re-examination, it would be more useful
to all of us to hear it from the witness in a non-
leading way rather than have Mr. Lamek state
propositions to Dr. Buehler and ask him to agree,
or disagree. I think, with respect, it is not fair
to the rest of us, or to the witness.

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THE COMMISSIONER: Well, I won't -
it is too late for me to take a strong stand on this
sort of thing, but there is no question that it
sounds better coming from the witness than it does



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from counsel, but why you should pick on Mr. Lamek over everybody else I don't know. I don't really think that these witnesses are going to be led that badly.

MR. LAMEK: Perhaps I can help my friend Mr. Strathy.

MR. STRATHY: The reason why you should pick on Mr. Lamek, Mr. Commissioner, is that he is Commission counsel and he has sat down with these witnesses and I would rather for all of our sakes that the witnesses tell us what they did --

MR. LAMEK: Mr. Strathy is right, but I am not the only one who sat down with these witnesses.

MR. STRATHY: No, quite so.

THE COMMISSIONER: All right. You have a solution for us?

MR. LAMEK: I hope so.

(ANSWERS BY DR. BUEHLER)

Q. For the reasons that you have given to me, you did not carry to any great distance the investigation of possible associations between non-nursing/non-medical Hospital personnel and death?

A. That is correct.

Q. I take it that does not for a moment preclude the possibility that any one of those



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(ANSWERS BY DR. BUEHLER)

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people in an unrecorded, unscheduled way could have
4 been present on the ward for any 1, any 10, any 30
5 of these deaths?

5

A. That is correct.

6

Q. But that is data which is not
7 available to you and on which you could therefore
8 base no conclusion?

8

9

A. That is correct.

10

Q. Now, with respect --

11

THE COMMISSIONER: I am sorry, are
12 you leaving that subject?

12

MR. LAMEK: Well not quite, I am
13 going on to another aspect of it.

13

14

THE COMMISSIONER: This term
15 "biologic possibility" --

15

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MR. LAMEK: Oh, that one.

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THE COMMISSIONER: That one sort of
18 got me, just what does that mean?

18

19

DR. BUEHLER: Biologic plausibility.

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MR. LAMEK: Q. Plausibility, was
21 that it?

21

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A. (Dr. Buehler): Yes. I think in
22 simple terms it means it does not make sense.

23

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THE COMMISSIONER: Biologic
24 plausibility?

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DR. BUEHLER: In terms of what is
known about biology?

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THE COMMISSIONER: Can you tell me
why it doesn't make sense, or whether it does make
sense, just so I won't be leading in any way. Can
you tell me, the biologic plausibility I have got
there does not make sense to me, so if you could just
try to tell me how that affected your thinking on
this matter? I am confusing you now.

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DR. BUEHLER: Yes, I am a little
confused.

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THE COMMISSIONER: All I have
written, if you will just picture this, I have
written in my notes the words "biologic plausibility"
and when the time comes to review these notes it
won't make any sense to me at all unless I put
something down underneath it, that's all.

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DR. BUEHLER: Okay. In terms of
the epidemiologic investigation of any disease
process a criteria, and if I am getting beyond what
I am allowed to say please let me know.

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DR. WALLACE: Would you like me to
answer that?

MR. LAMEK: It can't be beyond what
you are allowed to say to explain the terms you have
already used.



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DR. BUEHLER: Okay.

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DR. WALLACE: Would you like me to answer it? I would be happy to answer this question in terms of the investigation that Mr. Strathy asked me about. If the clinical picture that was shown by these children was not compatible with what you would expect from a large dose of Epinephrine being administered down the nasogastric tube, you would have come to the conclusion, our conclusion, that it was caused by Epinephrine lacked biological plausibility. Does that help?

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THE COMMISSIONER: Yes.

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MR. LAMEK: Q Put that into the context of associations with work patterns and that sort of thing?

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A. (Dr. Wallace): I don't think --

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THE COMMISSIONER: Biological plausibility is I take it those children suffering from certain - well, terminal events which were consistent with digoxin toxicity. How does that prevent a workman, or anyone else, from administering the - a workman, a garbage collector, or anybody else from administering the digoxin?

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DR. BUEHLER: No, it doesn't, it doesn't. I think if you look at the 4 deaths where



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2 there was inappropriate presence of digoxin, one of
3 those particular children was a child who suffered
4 his terminal event approximately I believe 1930 or
5 1730 in the evening. Given our understanding of what
6 Dr. Kauffman told us, it would not seem plausible
7 that an individual who visited the ward for a brief
8 period at approximately midnight, which would have
9 been that many hours later, could have been
10 associated with an accidental or inappropriate or
11 other incorrect administration of the medication to
12 that child.

12 THE COMMISSIONER: What about one
13 who visited instead of at 7:30 at night, let us say
14 about 3 or 4 o'clock in the afternoon?

14 DR. BUEHLER: That is an entirely
15 different issue.

16 THE COMMISSIONER: I know, but are
17 there not, do we not have people wandering around at
18 three; I take it all these garbage collectors and
19 people like that that you are referring to all come
20 in late at night, do they?

21 DR. BUEHLER: Our understanding was
22 there was a collection of garbage at approximately
23 midnight, or in the middle of the night.

23 THE COMMISSIONER: I would have
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thought that people - I don't want this to be taken as a slander upon garbage collectors at all, but it does seem to me if they are around there, around about midnight, and the children die in the early morning, it would be conceivable they could have administered the poison to the children, if indeed the children died from administration of poison, could they not?

DR. BUEHLER: That is possible, yes.

THE COMMISSIONER: I think the questions asked you were, why did you not investigate which garbage collectors, which ward clerks, and all these other people that were around, they were around on those particular days when the children died, that's all?

DR. BUEHLER: We looked at the housekeepers but in less detail.

DR. WALLACE: We looked at the housekeeping staff over a three-month period from January through to March, and from the records that we had for that time, assuming them to be true, there was no close association between the occurrence of death.

THE COMMISSIONER: I can see the housekeepers are probably more likely suspects than garbage collectors, if that is the reason why you



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didn't, that's fine. If there is some other reason
why the garbage collectors, and who are these other
people?

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DR. BUEHLER: It gets back to that
paragraph of the report which we have already
labelled as "speculative".

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DR. BUEHLER: I understand your question.

THE COMMISSIONER: Yes.

DR. BUEHLER: It gets back to issues of - well, maybe I don't understand your question.

THE COMMISSIONER: Well, you may have answered it already but the question that was posed to you really wasn't mine, I am just borrowing the question from some of the other counsel. We have the data for the nurses, we don't have any precise figures for the doctors but at least you went through all of the doctors and you discarded them because there was no pattern that was recognizable that could assist you, no doctor was associated with it.

DR. BUEHLER: Yes.

THE COMMISSIONER: Now, I have forgotten just exactly what you did say and I had better be careful. Chapter VIII. You say:

"To determine whether or not Hospital employees were associated with ward-associated deaths during the epidemic period,..."

I'm reading now from the bottom of page 19:



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"...employee records were reviewed primarily for those kinds of personnel who are present 24 hours a day in patient-care areas of the Hospital: physicians and nurses. This decision was based on epidemiologic findings regarding the time of death during the epidemic period and on the assessments of the pharmacology consultant regarding possible times of overdose administration."

And then you say what happened about the physicians and then the nursing assignments and you reach your conclusions. Then you say:

"There was no association observed between any physician and deaths during the epidemic period and no association between deaths and housekeeping personnel or ward clerks."

I take it that you did for housekeeping personnel and ward clerks the same sort of examination that you did for physicians, is that correct, as well as you could?

DR. BUEHLER: Yes, similar to that for physicians.



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THE COMMISSIONER: All right.

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DR. BUEHLER: We didn't have a
calendar of their comings and goings, for example.
Yes, I mean, we didn't ---

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THE COMMISSIONER: Well, let's say
there is ward clerk Smith - sorry, Dr. Smith -
ward clerk Jones. Would you investigate ward clerk
Jones to see whether in fact he or she was on duty
all of the days or all of the nights that these
children died, that's all. Was that sort of
investigation undertaken?

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DR. SMITH: I would like to answer
that. We actually did look at the ward clerks,
although, we didn't formally do the kind of matrix
analysis that we did for the physicians. There
were only three ward clerks and we did look at the
schedule that was available and tried to compare
their presence to the critical number of deaths
that had been decided according to Dr. Kauffman's
schedule. But we didn't do any actual matrix,
there were only three ward clerks I believe and
each one was checked against the times. That was
the extent of that investigation.

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THE COMMISSIONER: Well, what was
the result of that investigation?



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DR. SMITH: That not a consistent person was there of the three. I am trying to recollect something that I didn't have in my notes when I reviewed them but I believe that information we got from Mr. Wodinski, the assistant administrator that was helping us, told us in fact that one of the ward clerks had left somewhere during this period. So, in fact, we had a fewer number altogether than we started out with.

THE COMMISSIONER: What does a ward clerk do in a hospital? Ward clerk, he is a he or a she?

DR. SMITH: I think they were all women, yes.

THE COMMISSIONER: What do they do? Are they sort of an assistant to an assistant nursing assistant or something like that?

DR. SMITH: I do not know what the job specification is but if I could speculate I think that they keep records and put lab reports back into charts and generally do clerical work.

THE COMMISSIONER: They don't do nursing work though as such?

DR. SMITH: No, they do not, they are not nurses.



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DR. WALLACE: Ward clerks would
not normally go into patients' rooms.

4

THE COMMISSIONER: And would they
normally be functioning at night at all?

5

6

DR. WALLACE: No.

7

DR. SMITH: No, they went off duty
in the early evening and I believe some of them
went off duty at 8:00 and some of them went off
duty at 10:00. The schedule varied and I think
all of them were part time workers.

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THE COMMISSIONER: Well, we have
come a long way from biologic plausibility which
is what started this and I am not sure that I
still know what biologic plausibility is. Is that
something to do with plausibility and biology?
Because if that were so I would say that you are
saying that you didn't investigate some of these
people because it was implausible that they could
have performed the deed biologically, is that
correct?

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DR. WALLACE: No.

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DR. BUEHLER: I believe I said
that the concepts of biologic plausibility is
strained in applying it to this investigation.

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THE COMMISSIONER: All right. Well

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G5



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2 then, would it be all right then if I just take it
3 out of my notes and I won't have to worry about
4 it any more?

5 DR. BUEHLER: That's quite all
6 right, fine.

7 THE COMMISSIONER: All right.
8 Now, will you carry on, or do you want to carry on,
9 Mr. Lamek, it is 11:30?

10 MR. LAMEK: I think I can probably
11 finish in 5 minutes and take a break then and start
12 with something brand new after the break.

13 THE COMMISSIONER: You certainly
14 could if a person in this room would keep quiet.

15 MR. LAMEK: That is a very great
16 assistance, Mr. Commissioner.

17 THE COMMISSIONER: Yes, all right.

18 MR. LAMEK: Q. In such considera-
19 tion that you gave to ward clerks, housekeeping
20 personnel and so on in this association phase of
21 the work, did you apply to those persons the same
22 criteria as apparently were applied to nurses and
23 physicians, that is to say, presence on the ward
24 at or within four hours of the onset of critical
25 symptoms of the child?

A. (Dr. Buehler) For the



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3 housekeepers - actually, we looked at them in a
4 similar way that we looked for physicians because
5 we did not have as detailed information to determine
6 whether someone was there or not there within four
7 hours with respect to the two terminal deteriorations.
8 The question of specific numbers of hours in relation
9 to terminal deterioration was addressed only for
10 the nurses; for the physicians we did not have
11 information as to when they would come on or off duty.

12 Q. Okay. Well, let me take an
13 example.

14 (ANSWERS BY DR. BUEHLER)

15 A. Yes.

16 Q. If you had been aware from
17 an entry in some record that was available to you
18 that Joe the garbage man had been on the ward at
19 4 o'clock in the afternoon doing his thing and
20 indeed had stayed there for a half an hour and had
21 a cup of coffee and a chat with a couple of his
22 friends on the nursing staff, even with that
23 information, would you have established any
24 association between Joe the garbage the man's
25 presence in the middle of the afternoon and a
death that occurred in the middle of the following
morning, 12 hours later?



1
2 (ANSWERS BY DR. BUEHLER)

3 A. No.

4 Q. Okay. There must have been
5 some parameters then within which you considered
6 presence on the ward to be of some significance?

7 A. Yes.

8 Q. What were they?

9 A. For nurses we looked at four
10 or eight hours, for physicians and others we looked
11 at the general duty roster. For example, if a
12 doctor was on call on the night of Friday night then
13 we would consider that he would possibly be associated
14 with a death that occurred early in the hours of
15 Saturday morning.

16 Q. And if Mrs. X the ward clerk
17 went off duty at 10 o'clock in the evening.

18 A. Right.

19 Q. And that would be a matter
20 of record I take it, there would be ways of
21 verifying when she went off duty on a particular
22 night?

23 (ANSWERS BY DR. SMITH)

24 A. We didn't actually look at
25 the payroll rosters for the ward clerks.

Q. All right.



(ANSWERS BY DR. SMITH)

A. We didn't do that.

Q. Well, let's make the assumption that had you looked you would have found that on March 21st in the evening the ward clerk Mrs. X went off duty at 8 o'clock in the evening. Let's make that assumption.

A. All right.

Q. And we know that in the early hour morning of March 22nd Justin Cook got into serious difficulties and subsequently died; got into difficulties at 3:45 in the morning and you have an opinion from Dr. Kauffman as to the likely period in advance of the onset of the terminal events when the drug may have been administered to him and it is well after 8 o'clock in the evening of the preceding day. In those circumstances, would you have regarded Mrs. X's presence until 8:00 p.m. on March 21st as establishing any sort of an association between that and the deaths of Justin Cook?

A. (Dr. Buehler) No.

A. We would not, it would not have been biologically plausible.

THE COMMISSIONER: Back to those.



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MR. LAMEK: Oh, no. Now, that one I can understand.

Q. So, in one way or another parameters are drawn as to whether an association may exist between a member of the staff of any kind and a death.

(ANSWERS BY DR. BUEHLER)

A. That is correct.

Q. All right. Now, clearly at some stage in this investigation you did begin to narrow the focus of attention to nurses and doctors but indeed not to all nurses and doctors. You focused your attention as I understand you, and this I think you said at page 769 yesterday, to those who were on duty on the cardiology wards and who had prolonged times on the wards and who were there on a round the clock sort of basis. You wouldn't remark on their presence at any time of the day or night. Do I understand correctly the group on which you focused?

A. Right, the prolonged time being another way of taking care of patients.

Q. All right. So, you focused on that group of the Hospital's total complement of doctors and nurses whom you knew from the records



(ANSWERS BY DR. BUEHLER)

available to you to have been involved to a greater or lesser extent in patient care on the cardiology wards?

A. Yes.

Q. All right. Now, did you consider the possibility that a nurse or a physician from the fifth floor might amble down in the middle of the night, or from the third floor might wander up in the middle of the night and do something inappropriate to patients on the fourth floor?

A. I believe in summarizing our findings we mentioned that possibility was not excluded by our investigation.

Q. Okay. Might it have been not totally excluded but partially excluded if you had subjected their work rosters and duty rosters to the same kind of scrutiny as you subjected those of the nurses and doctors whom you know to have been engaged on the fourth floor?

A. You're quite right.

Q. Why did you not do that?

A. Well, we decided to limit ourselves to those who were responsible for care on 4A/4B and that exercise, as someone has referred



1
2 (ANSWERS BY DR. BUEHLER)

3 to it, was a very, very prolonged exercise. I think
4 that if the time constraints on our investigation
5 were considerably greater we may have broadened
6 the scope of that type of investigation.

7 Q. Had the time constraints been
8 considerably less?

9 A. Oh, that's right, yes.

10 Q. Okay. You said yesterday at
11 page 792 that there was no data for you to look at
12 with respect to nurses and doctors from other areas
13 of the Hospital. I would not have thought that
14 that was so. Did you make any enquiry as to the
15 kind of ward payroll information and the call
16 schedules from other services in the Hospital to
17 determine whether the data were available?

18 A. We did look at the call
19 schedule Hospital-wide for physicians.

20 Q. Residents, yes.

21 A. I believe that there may
22 have been - it is still quite likely it is
23 possible there may have been similar types of
24 information for nurses on other wards if they kept
25 their records like 4A/4B.

Q. There is no reason to think



(ANSWERS BY DR. BUEHLER)

they did not, is there?

A. There is no reason to think that, no.

Q. Do I take it then it was probably not so much the unavailability of information as to the whereabouts of doctors and nurses in other parts of the Hospital but the sheer magnitude of the investigation that caused you to narrow your focus as you did?

A. For nurses, that is correct.

Q. Yes.

A. We did look at Hospital-wide call schedules for physicians.

Q. Yes, thank you. One other matter and it goes to the suggestion raised by my friend Mr. Strathy this morning when he asked you to assume with him the hypothesis of a cluster or epidemic of congenital heart defects in the infant population at large in Toronto or, I think he said in the Province.

A. Yes.

Q. And certain conclusions flow from that hypothesis, and you stated them. Have you any reason to suspect that the hypothesis may have



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2
3 (ANSWERS BY DR. BUEHLER)

4 had validity in the period from the summer of 1980
5 until the spring of 1981?

6 A. I'm not sure I understand
7 the question exactly.

8 Q. Well, the hypothesis - I am
9 asking you, you accept the premise for the sake of
10 the arguments that flowed from it, does the premise
11 though have validity? Is there anything to suggest
12 that there was indeed an epidemic in the general
13 population of congenital heart disease in infants
14 in Toronto or in Ontario in the summer of 1980 to
15 the spring of 1981?

16 A. We did not collect information
17 that could answer that question directly.
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(ANSWERS BY DR. BUEHLER)

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Q. Did the information that you

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did collect bear upon the question?

5

A. In terms of population of

6

children who died, that is the only extent to which

7

I could address that issue. The children who died

8

had a variety of different diagnoses as listed in

one of the appendices of our report.

9

Q. Mr. Strathy put to you and

10

I think you agreed that if there were such an

11

epidemic of congenital heart disease in infant

12

population you would expect to see that manifested

13

at The Hospital for Sick Children because it is a

14

referral hospital, tertiary care, specializing in

15

cardiological problems, you agreed with that I

believe?

16

A. (Dr. Smith) Yes, I agree with

17

that.

18

Q. Yes.

19

A. (Dr. Smith) One could look

20

at those data now and confirm or disconfirm that

statement with some degree of certainty.

21

A. In addition to that I believe

22

we have mentioned that we have looked at admissions

23

through the cardiology service --

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(ANSWERS BY DR. BUEHLER)

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Q. Yes.

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(ANSWERS BY DR. SMITH)

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A. -- as part of the background information under one of the sections of our report, and we did not observe a nine-month increase in admissions to the cardiology ward that would be comparable to what you see in Figure 3 of our report.

Q. Indeed did any of the studies which you performed in the course of doing your work, the admissions study, the occupancy rate study, the severity of disease study, such examinations as you made (for example, referrals from Winnipeg, the information that you have obtained as to place of origin of patients for the death roommate study) in any of those things is there any evidence to suggest that there was indeed an epidemic of congenital heart disease and defects among the infant population in this city and this province in the summer of 1980 and the spring of 1981?

A. In order to determine if there was an epidemic in the province one would have to look at the incidence rate per number of live births.

Q. Yes.



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(ANSWERS BY DR. SMITH)

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A. Since these figures do not reflect that directly we can't say that there was or there was not an epidemic in the province.

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Q. To the extent that you told Mr. Strathy you would expect an effect of such an epidemic to be felt at The Hospital for Sick Children --

9

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11

12

A. Yes.
Q. -- did anything that you discovered suggest that such effect was being felt at The Hospital for Sick Children?

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17

(ANSWERS BY DR. BUEHLER)

A. That could be addressed most precisely by looking at admission rates.

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Q. One other thing in the hope that you may be able to save me or perhaps more importantly Miss Fineberg a good deal of work, do you have available the lists of Category A and Category B deaths with which each nurse was associated as shown in Table 11?

A. We don't have that available



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(ANSWERS BY DR. BUEHLER)

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this moment but --

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Q. Could you furnish it to us,
please, and I will provide it to everybody.

5

6

I would like -- you know, of course,
what I am asking?

7

A. Yes.

8

9

10

Q. When I look at, let us say,
7-0-something, let's pick one at random. 705. I
would like to say, please, which were the 8 night-
time Category A deaths with which she was associated.

11

12

A. That could be produced.

13

14

Q. Could you? I would be very
grateful if you could. If it is not too much
effort.

15

16

A. It would be up to Dr. Smith
and Mr. Kusiak. The data is in their hands.

17

Q. Great.

18

19

A. (Dr. Smith) We will have to
search through the pile.

20

21

MR. LAMEK: I have no more questions.
I am very grateful to you for having come and helped
us as you did.

22

23

THE COMMISSIONER: Yes. From all of
us.

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Ladies and gentlemen, we are very indebted to you, Dr. Smith, Dr. Wallace, Mr. Kusiak - I suppose special thanks to you, Dr. Buehler. You are the stranger in our midst.

We are very grateful for your time and I suggest that you beat a very hasty retreat before somebody decides that they want something further from you.

All right. We will take twenty minutes.

--- recess.

--- on resuming.

MS. CRONK: Our next witness, Mr. Commissioner, is Miss Mary Costello.

MARY COSTELLO, Sworn

DIRECT EXAMINATION BY MS. CRONK:

Q. At the outset, Miss Costello, by way of warning both myself and others in the room, it is sometimes very difficult to hear the answers that a particular witness gives. The room is very large, and we all have a habit on occasion of dropping our voice or speaking softly.

I would ask you to just bear that in mind if you would and try to keep your voice up as we go through the evidence.



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As I understand it, Miss Costello,
you obtained your Registered Nursing Diploma from
St. Joseph's General Hospital in Peterborough,
Ontario, in 1952; is that correct?

A. Yes.

Q. That is very audible, thank
you.

And from September 1950 to until
the following year you worked as staff nurse at
The Hospital for Sick Children here in Toronto.

A. Yes.

Q. Over the next several years
as I understand it you worked as a private duty
nurse both in Peterborough and as a staff nurse
in Pediatrics at the Peterborough Civic Hospital,
and then as a staff nurse working with newborns
at St. Joseph's Hospital also in Peterborough; is
that correct?

A. Yes.

Q. In July 1956, as I understand
it, you returned to The Hospital for Sick Children
as a staff nurse and held that position for the
next two years.

A. Yes.

Q. You then worked as an evening



B7 1
2 and night supervisor and as a general staff nurse
3 in Pediatrics at Vancouver General Hospital in
4 Vancouver.

5 A. Yes.

6 Q. In June 1963 you accepted
7 a position as nursing coordinator and evening and
8 night supervisor at Montreal Children's Hospital
9 in Montreal.

10 A. Yes.

11 Q. In those years you covered
12 a number of hospitals across the country.

13 You remained in Montreal, as I
14 understand it, until June 1972.

15 A. Yes.

16 Q. In the meantime, however,
17 while you were in Montreal working at Montreal
18 Children's Hospital, did you then obtain your
19 Bachelor of Nursing from McGill University?

20 A. Yes.

21 Q. And in 1973, as I understand
22 it, you completed a Master's of Education at
23 OISE, that is Ontario Institute for Studies and
24 Education here in Toronto?

25 A. Yes.

THE COMMISSIONER: Is that a Master



1
H8 2 of Education or a Master of Nursing?

3 MS. CRONK: My understanding is
4 that it is a Master of Education.

5 THE WITNESS: Education, specializing
6 in adult education.

7 MS. CRONK: Q. Having completed
8 your Master, did you then join the staff of Toronto
9 General Hospital in 1973?

10 A. Yes.

11 Q. You remained there, as I
12 understand it, for the next three years?

13 A. Yes.

14 Q. And in August of 1976, did
15 you then rejoin the staff at The Hospital for
16 Sick Children?

17 A. Yes.

18 Q. What position did you assume
19 upon rejoining the staff at The Hospital for Sick
20 Children?

21 A. Head Nurse on 5A, which at
22 that time was the cardiology ward.

23 Q. We have heard, Miss Costello,
24 that in April of 1980 the cardiology ward at The
25 Hospital for Sick Children relocated from Ward 5A
to Wards 4A/B. After that relocation did you



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function as well as Head Nurse on either Ward 4A or
4B?

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A. I did on 4B.

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Q. How long after the relocation
of the cardiology unit to Wards 4A/4B did you hold
the position of Head Nurse on 4B?

7

8

A. Until August 1982.

9

10

Q. Where did you assume duties
in the latter part of the summer of 1982?

11

A. Riverdale Hospital.

12

Q. Is that where you are
currently employed?

13

A. Yes.

14

Q. In what position?

15

A. At the time I went there I
was Head Nurse on a ward for a year. I am now
working as nurse associate in nursing education.

17

18

19

Q. Miss Costello, you have been
kind enough to provide me with a copy of your
curriculum vitae and obviously the questions I have
just asked you were drawn from it.

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I wonder if you would look at it
and tell me, please, if it does include a recital
of the various appointments and positions that you
have held that we have just reviewed?

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A. Yes.

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MS. CRONK: Thank you.

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THE COMMISSIONER: What number are
we at?

5

THE REGISTRAR: 329.

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MS. CRONK: Sorry, sir, 329?

7

THE COMMISSIONER: 329.

8

--- EXHIBIT NO. 329: Curriculum vitae, M. Costello.

9

MS. CRONK: Q. As I read your
curriculum vitae, Miss Costello, you have been
actively involved in the nursing profession in a
practicing sense for almost 31 years. Do I have
that correctly?

13

A. Yes.

14

Q. And you worked over the years
both in pediatrics and in cardiology and as well
you have worked on occasion especially with neonates;
is that correct?

17

A. I have worked with neonates
but not a ward that was made up only of neonates.

19

Q. You have worked as well over
the years you have told us in pediatrics and in
cardiology?

21

22

A. Yes.

23

Q. For at least six years, if I
have done the calculations correctly, you were a

24

25



1
H112 Head Nurse on the Cardiology Wards at The Hospital
3 for Sick Children?

4 A. Yes.

5 Q. That includes your time both
6 as a Head Nurse on Ward 5A and your time as a Head
7 Nurse on Ward 4B until you left to join Riverdale
8 Hospital?

8 A. Yes.

9 Q. Can you tell us, Miss
10 Costello, what your duties were as Head Nurse on
11 Ward 4B?

12 A. They were management of
13 patient care, ensuring quality of patient care,
14 ensuring that the patients' nursing needs were
15 analyzed and met. Communication and cooperation
16 and working with other members of the health team.

16 Management of the staff. Quality
17 control measures to see that the patient care
18 quality remained at the standards we wanted and to
19 see that the staff performance met adequate
20 standards.

21 Hiring staff, orienting and educating
22 staff. If necessary, promoting or demoting or
23 removing staff; evaluating staff. Budgets for
24 staffing and for equipment on the ward.
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Q. Did your duties as Head Nurse on Ward 4B require you as well to monitor and assign specific nursing duties to the various nurses who worked on that ward?

A. Yes.

Q. Did your duties include responsibility on a day-to-day basis for active patient care?

A. No. Although I may have done that on occasion when people were busy or the need was apparent, but, no, it was not part of my duty.

Q. When you were Head Nurse on Ward 5A, Miss Costello, were the duties that you have just described as well duties that you then discharged?

A. Yes.

Q. Was there more than one Head Nurse on Ward 5A before the relocation?

A. No.

Q. You were the only Head Nurse then for those years?

A. Yes, I was.

Q. What were your normal working hours at The Hospital for Sick Children as Head



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Nurse of Ward 4B?

3

A. Officially 0715 to 1545.

4

I rarely left that early.

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Q. 7:15 in the morning to

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1545 in the late afternoon?

7

Was there ever a situation as best
you can recall it, Miss Costello, when as Head Nurse
of that ward you were called in to duty, to come
in the Hospital during the evening or the night
shift?

10

11

A. No. I never came in for

12

duty. I occasionally came in for a meeting.

13

Q. Did you as well work weekends?

14

A. Sometimes, and when I did I

15

had a different position than Head Nurse on that
ward; I was supervising a group of wards in the
Hospital.

16

17

Q. I am not sure I understand

18

that. When you were called in or assigned duties
on the weekend, I take it you were not functioning
as the Head Nurse on Ward 4B but had a larger
responsibility for a number of wards?

19

20

21

A. Yes, which included 4B and

22

4A.

23

Q. We have heard, Miss Costello,

24

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H14 1
2 in other evidence that the Head Nurse on Ward 4A
3 during the nine-month period of time with which
4 we are interested was Mrs. Elizabeth Radøjewski.

5 A. Yes.

6 Q. Did her hours correspond
7 with your own?

8 A. Yes.

9 Q. In the absence of a Head
10 Nurse on duty at night on Wards 4A or 4B, who
11 was the senior nursing representative who was
12 responsible for patient care on those wards?

13 A. Specifically located on
14 those wards, the team leader in charge of each
15 of 4A and 4B, but in the Hospital there were
16 evening and night supervisors as well.

17 Q. All right. An evening
18 supervisor is something different than a night
19 supervisor in nursing terms?

20 A. Just the hours she works.

21 Q. What were the hours generally
22 worked by evening nursing supervisors?

23 A. 3:30 to 11:30.

24 Q. And what were the hours
25 generally worked by night nursing supervisors?

A. 2330 until 0730 in the morning.



1
H15 2 Q. Can you help us, Miss
3 Costello, as best you can recall it, how many
4 night supervisors were there in the Hospital during
5 the period July 1980 through to the end of March
6 1981?
7 A. Four or five.
8 Q. How many would be on duty
9 on any particular evening -- sorry, any particular
10 night?
11 A. It could range from about
12 two to four.
13 Q. Do you recall now the names
14 of any of the night supervisors who worked at the
15 Hospital during that nine-month period?
16 A. Lynn Johnston --
17 Q. Yes.
18 A. -- Cathy Coulson, Mrs.
19 Carter, Mary Sword.
20 Q. Anyone else?
21 A. Maybe, I can't recall at
22 this time.
23 Q. Was there a Miss James?
24 A. Yes.
25 Q. Who was also a night
supervisor?



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A. Yes.

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Q. And you have told us how

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many night supervisors on a normal night would

5

likely be on duty in the Hospital. How many

6

evening supervisors would normally be at work in

7

the Hospital?

8

A. Similar, about two to four.

9

Q. Do you recall now who the

10

evening supervisors were during the period July

11

1980 to March 1981?

A. Mitzi Kamada --

12

Q. Kamada?

13

A. K-a-m-a-d-a.

14

Q. Yes.

15

A. Sue Thomas.

16

Q. Was there a Miss Pukas?

17

A. Yes.

Q. Miss Woolley?

18

A. Yes.

19

Q. Any others that you can

20

now recall?

21

A. I did find out the name of

another last night but I have forgotten it.

22

MS. SYMES: Miss Bailey?

23

THE WITNESS: Yes.

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MS. CRONK: Thank you.

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THE COMMISSIONER: These are
night supervisors, is that right, in the Hospital?

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THE WITNESS: The more recently
listed ones were the evening supervisors.

7

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MS. CRONK: Yes.

Q. And they, Miss Costello,
were the supervisors who worked I believe you said
from 3:30 in the evening until 11:30 in the evening?

10

11

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16

A. Yes.

Q. Apart from the evening
and the night supervisors and the Registered Nurses
or the Registered Nursing Assistants who were
actually on Wards 4A or 4B on the night shift,
were there any other representatives of the nursing
department in the Hospital who would be on duty
during the night shift on any given night?

17

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19

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A. The ward clerks were not
nurses, but they were employed by the nursing
department and they would be on the ward in the
evening.

21

22

Q. All right. How many ward
clerks were assigned to Wards 4A/4B?

23

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A. Three.

Q. What were their normal hours



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TORONTO, ONTARIO

Costello
dr.ex. (Cronk)

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of duty?

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A. One worked 0700 to 1445 and

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one worked 1000 to 1845 and one worked 1400 to

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2145.

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Q. What were the duties of the ward clerks, Ms. Costello?

A. They were clerical and receptionists.

Q. And by clerical, did they have responsibility for the maintaining and updating of the various medical records for the patients who were being cared for on Wards 4A/4B?

A. They didn't record medical or nursing opinions, they didn't record on them except to copy things on to a graph and to file them. The laboratory reports that came they did maintain those charts by putting pages into the appropriate chart and by stamping them with the addressograph of the patient.

Q. To the best of your knowledge, Ms. Costello, did any of those three ward clerks work the night shift beyond 2145 hours?

A. Not officially, I know they may have stayed unofficially to complete work some nights.

Q. To the best of your knowledge would they ever be on duty after midnight on the wards?

A. No, I don't think so.

Q. We have heard something as



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well, Ms. Costello, about teaching team leaders that were associated with Wards 4A/4B. Can you help us briefly with what the function and responsibility of a teaching team leader was?

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A. It was a delegated function from the head nurse to help with the orientation and education of the nursing staff on the ward primarily, but it was not a protected position like a teacher or an instructor would be, so that she also had other functions, one of which was to relieve the head nurse on her, not weekends, but other time off on vacation, one of which might have been to relieve a team leader or a general duty nurse as needed.

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Q. How many teaching team leaders were there associated with the cardiology ward?

21

22

23

24

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A. One.

Q. I am sorry?

A. Numbers or people? There was one person on 5A and one other person when we came to 4A/B.

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Q. So by the time of the relocation there were in fact two team leaders?

A. No. Liz Radojewski was team leader on 5A and she was promoted to head nurse.

Q. Yes.



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A. And another teaching team leader was appointed.

Q. To take her place?

A. Yes.

Q. Did the teaching team leader on Ward 4A/B ever work the night shift?

A. Yes.

Q. Was that a matter of routine that she was normally assigned both day shift and night shift?

A. She was not assigned on a routine rotation like the other people were, but she did work nights purposely to orientate staff who would be in charge on the night shift for the first time, she would work two or three nights with them to orientate them. She might occasionally relieve a night nurse and work as a team leader or a general duty nurse during the night.

Q. When a teaching team leader was assigned for duty, or present on the wards for night shift, would she have active involvement in the care of the patients on the wards?

A. When she was orientating the person in charge she would more likely be doing the charge duties which involve supervision and



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organization of the patient care but not actually doing it. The same if she were a team leader, but if she were functioning as a night nurse she would have normal assignment of patients.

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Q. And that happened on occasion?

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A. I can't tell you that it did, but I think so.

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Q. We have heard something as well, Ms. Costello, about patient co-ordinators that were attached to those two wards. Can you tell us what a patient co-ordinator is and what their duties were on 4A and 4B?

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A. I am not sure, I do not think that name is familiar to me, are you talking about clinical specialists or something?

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Q. Well, we have heard in evidence from Carol Browne who was a clinical nurse specialist; we have heard as well about Janet Beed who was a second clinical nurse specialist after August of 1980 on those wards. Was there another position with which you are familiar known as a patient co-ordinator?

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A. No, I think it may have been discussed and happened after I left in 1982, in relation to primary nursing that was instituted on the wards. It would be a different way of organizing



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nursing and instead of team leader you would have patient co-ordinator, or the title would change and some of the duties would change, but not while I was there.

Q. We have heard something as well, Ms. Costello, about the I.V. team. As I understand it there are a number of nurses who are permanently attached to I.V. teams in the Hospital, is that correct?

A. When you say - I assume we are talking about the period of that investigation?

Q. Yes, we are, Ms. Costello.

A. Yes.

Q. And were those nurses as well responsible directly for patient care on the cardiology wards at any time?

A. No.

Q. Was there normally an I.V. team on duty during the night shift?

A. No.

Q. During that nine-month period?

A. No.

Q. During the course of the day shift would the I.V. team unsummonsed have any reason to attend on Wards 4A/4B?



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A. Yes, they did routine rounds.

They drew blood for specimens, as well as starting I.V.'s, so they would come and do the routine rounds. They could, as you say, be summonsed when we needed them for something, or they could just come back to check whether an intravenous was working well.

Q. But they were not present and didn't fill those duties during the night shift?

A. No.

Q. We have heard, Ms. Costello, of a number of changes which took place as a result of the relocation, of the relocation of the cardiology unit from Ward 5A to Wards 4A/B; you have told us yourself that you became head nurse on 4B when the relocation took effect. Was there at that time, as has been previously suggested, the introduction of a second head nurse for 4A?

A. Yes, there was.

Q. We have heard as well that the total number of beds on those two wards was increased on the relocation from 38 to 42. does that accord with your recollection?

A. Yes.

Q. And we have heard in evidence that Ward 4A had some 19 beds, 12 of which were



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infant-sized beds, does that accord with your
recollection?

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A. Yes.

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Q And on 4B it is our understanding
that there were 23 beds in total following the
relocation, 6 of which were infant beds, do I have
that correctly?

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A. Yes.

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Q I direct your attention, Ms.
Costello, to the chart that has been set up on the
board here to the left. It may be helpful to you,
sir, to have Exhibit 304 before you, which is a
schematic diagram of the layout of Wards 4A/4B that
was previously marked as an exhibit. To help you,
sir, the scale drawing that I have just referred
Ms. Costello to is marked as Exhibit No. 3, Exhibit
No. 3 at the preliminary hearing, and the proceedings
involving Susan Nelles.

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Very briefly, Ms. Costello, I would
like you, if you could, to review with us the
location of various rooms on the wards. Would it be
helpful to you if the chart was closer to you?

A. Yes.

Q It is not very heavy.

THE COMMISSIONER: Would you just let



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me see it to see how it compares with this?

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MS. CRONK: The diagram that was marked as Exhibit 304, sir, looks from the north of the ward looking to the bottom of the page, leading to the south, this is the reverse looking from the south end of the ward, not showing the full south corridor.

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Q. I do not know if it is going to be convenient to you if I give it to you that way, so that you can see it and the Commissioner as well.

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A. Yes.

Q. We have spoken briefly - if that gets too heavy, Ms. Costello, just let me know.

A. Yes.

Q. We have spoken briefly about the - I think we have found assistance, Ms. Costello. Ms. Costello, the Commissioner has before him a different form of diagram, but for the purposes of the one that is before you, I take it the nursing station is shown in the middle of the diagram?

A. Yes.

Q. Do I have it correctly that all of those rooms which formed Ward 4B are located to the immediate right of the nursing station?

A. Yes, but some rooms down here did as well.



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Q. You are pointing to the south, there is a corridor shown on the diagram that leads to the south, were there rooms along the east side of that corridor which were as well part of Ward 4B?

A. The east side of this corridor, yes.

Q. And the rooms on the right side or the east side of that corridor were attached to Ward 4B, and the ones on the left were attached to Ward 4A?

A. Yes, 4B and 4A, although we did share service rooms.

Q. You are pointing to the left of the diagram; I take it that all of the rooms to the left of the nursing station were Ward 4A?

A. All of the patients' rooms were where we did share utility rooms, et cetera.

Q. You have told us there were 6 infant beds located on Ward 4B; do I have it correctly that they were in Room 431?

A. Yes.

Q. That is immediately adjacent to the nursing station?

A. Yes, it is.

Q. And there were 12 infant beds



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as I understand it on Ward 4A; and we have heard in previous evidence that 6 of them were located in Room 418 immediately adjacent to the nursing station on the left, is that correct?

6

A. Yes.

7

Q. And where were the other six infant beds on Ward 4A, Ms. Costello?

8

9

A. Room 421 which was next along the corridor from 418.

10

Q. There were 6 in Room 421 as well?

11

A. Yes.

12

Q. Were Rooms 421 and 418 connected in any way?

13

14

A. No. There were doors out to the corridor but no doors in between.

15

16

Q. Where were the medication rooms on Ward 4B?

17

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A. Room 430, next to the nursing station. The door opening to the corridor but the window opening to the nursing station.

20

Q. And similarly, where was the medication room on Ward 4A?

21

22

A. Room 417.

23

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Q. And similarly there was a door leading to the corridor and a window looking into the



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nursing station, is that correct?

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A. Yes.

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Q. We have heard something as well

5

about the sleeping quarters that were available on

6

those wards for residents during this nine-month

7

period, where were they located, Ms. Costello?

8

A. They were not on the ward, they

9

were adjacent to the ward. Down the length of this

10

corridor, half way through the Hospital where the

elevators were and then extending out in each direction.

11

Q. You are pointing to the bottom

12

of the south corridor?

13

A. Yes.

14

Q. I take it that in addition to

15

the observation windows or the windows from the

16

medication rooms looking into the nursing station,

17

there were as well a series of windows on each of

Room 418 and Room 431, is that correct?

18

A. Yes, there were three windows

19

on each, these open into the nursing station.

20

Q. And what was the purpose of

21

those windows?

22

A. It allowed closer observation

from the nursing station.

23

Q. Of the patients in respectively

24

both of those rooms?

25



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A. Yes.

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Q. Was there any rule of which

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you are aware, Ms. Costello, or did you in fact

5

dictate to your nurses on Ward 4B whether or not the

6

blinds on those windows were to be left open or to

7

be closed?

8

A. There was no rule but they were

very seldom closed.

9

Q. Did that apply as well on the

10

night shift, or do you know?

11

A. Yes, it did.

12

Q. They were very seldom closed

13

then at night?

14

A. That is right.

15

Q. Dealing with the medication

16

rooms for a moment, the one on Ward 4A and the one on

17

Ward 4B, were the doors to those two rooms required

to be kept locked when not in use?

18

A. No, they were not.

19

Q. In fact, did any particular nurse

20

on the ward carry the keys to the door of the

21

medication room on Ward 4B?

22

A. There was no key to the door of

23

the medication room; there were keys to the narcotics

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cupboard which was inside the medication room.

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Q And as I understand it there was no keys available to any nurse on 4A or 4B whereby the door to that room, the medication rooms, could be locked?

A No.

Q And dealing then with what was located inside the medication rooms, very briefly there was a narcotics cupboard which you have just referred to?

A Yes.

Q Was there any rule regarding the locking of that cabinet?

A It had double locks, it had one key that opened the outer door and one key that opened the inner door, it was always locked unless someone was in attendance there.

Q Was that a rule on your ward?

A Yes.

Q Was that the rule as well on Ward 4A?

A Yes.

Q As a practical matter, Ms. Costello, during a day shift when you were working, who was responsible for carrying the keys to the narcotics cupboard on Ward 4B?



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A. The nurse who counted the drugs in the morning theoretically was responsible, but any RN working on 4B who needed to give a narcotic or something from the control drug cupboard could borrow them, relief or students could not have them, they would have to have a 4B staff nurse with them.

Q. Could a registered nursing assistant assigned to Ward 4B carry the keys to the narcotics cupboard?

A. No.

Q. Did the same procedure apply during the night shift on the wards?

A. Yes.



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Q. All right. In addition to the narcotics cupboard was there as well in the medication room, Ms. Costello, a separate cupboard for non-controlled or non-narcotic medications?

A. Yes, there was and also shelves.

Q. All right. Well, dealing first with the cupboard. Was that medication cupboard kept locked?

A. No.

Q. Was there in fact a locking mechanism on it at all?

A. I don't think so.

Q. All right. You have referred as well to open shelves. Was there any distinction drawn between the type of medications that were to be kept in the medication cupboard as opposed to located on the open shelving?

A. There was no rule about it we did it for ease of finding things and as I recall stock medications, which means the medications that were provided to the ward without being prescribed for a specific patient stayed on the shelf in alphabetical order. The prescription medications for each patient stayed in one cupboard and external, non-medications but things like enemas and lotions



1
2 stayed in another cupboard.

3 Q. Was digoxin regarded as a
4 stock medication on Wards 4A, 4B?

5 A. Yes.

6 Q. Do I take it then that all
7 forms of digoxin available on those wards were
8 kept on the open shelving in the medication rooms?

9 A. Yes.

10 Q. And that extended as well
11 to the bottles of elixir?

12 A. Yes.

13 Q. Was that the case as well on
14 4A insofar as you know?

15 A. Yes. I think I skipped
16 something in that cupboard, there is also a medication
17 fridge which contain the medications that needed to
18 be kept refrigerated.

19 Q. Would there be circumstances
20 which applied such that digoxin would ever be kept
21 in the medication refrigerator?

22 A. No.

23 Q. There were no situations in
24 which it required cooling before administration?

25 A. No.

Q. All right. If digoxin -



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I ask you to assume for the moment that a particular dose of digoxin had been prepared in advance for later administration to a patient on the ward, would that be kept in the medication refrigerator?

A. No.

Q. I would ask you, and I realize it is awkward, Ms. Costello, and I will try to do this very quickly, but could I ask you to look again at Rooms 418 and 431 on the diagram behind you?

A. Yes.

Q. Would I be correct in suggesting, Ms. Costello, that the physical distance between Room 431 and 418 is not that great?

A. No, it is not, it is a little bit more than the width of the corridor.

Q. Can you approximate for us what that would be?

A. This is a door to 431, this is the door to 418, the nursing station is in here.

Q. So that if one were standing in Room 431 and wanted to access Room 418, one could simply pass in front of the nursing station or pass directly through the nursing station, do I have that correctly?

A. Yes.



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Q. And the same would obviously
apply in reverse?

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A. Yes.

5

Q. Right. Can you approximate
for us at all what the distance was between the
two rooms. If you can't, that's fine. Do you
know how many feet it was?

8

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A. What's the normal corridor
width about 10 feet or something. So, it may be
about 20 or 30 feet.

10

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Q. All right. And we have heard
something as well, Ms. Costello, about isolation
rooms located on those two wards. Was there a
room specifically designed and assigned for
isolation patients on Ward 4B?

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A. No, but if possible when we
had an isolation patient we used one of the single
rooms.

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Q. Where were the single rooms
located? Perhaps you could just tell us the room
numbers.

20

21

A. 438 and 439.

22

Q. Thank you. And was there a
specific room on Ward 4A designated for isolation
patients?

23

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A. No. The same as 4B it wasn't necessarily designated but the single room was 423.

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Q. And when you say single room, do I take it that it was designed for one patient only, be it an infant or an older child?

7

A. It was designed for that, occasionally it might have had two infants in it.

8

9

Q. We are almost finished, Ms. Costello. I am interested as well in the points of entry, the way one would physically arrive on Wards 4A and 4B. Just looking at the diagram behind you, there is a stairway on Ward 4A labelled as stairwell No. 2. Do you see that?

13

14

A. Yes.

15

Q. Right. And, in addition, there is a similar stairway located in exactly the same position on Ward 4B. Do I have that correctly?

16

17

A. Yes.

18

Q. And that is labelled stairwell No. 3?

19

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A. Yes.

21

Q. Where does stairwell No. 3 lead you, Ms. Costello, or where did it during the nine-month period?

22

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A. It would lead up to the

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Ward 5B; on third floor it would enter some laboratory
refrigeration areas I think.

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Q. All right. And do you recall
now where the stairwell on Ward 4A led to?

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A. Biochemistry laboratory
down on third and Ward 5A upstairs.

7

8

Q. Ms. Costello, would you like
to sit down. Let me move this chart.

9

10

In addition to the two stairwells
that you have just pointed out, Ms. Costello, was
there as well an elevator or bank of elevators
located on the south corridor immediately in front
of the south end of the nursing station?

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A. There was a single elevator
there.

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Q. And that's in the location
I have just described?

17

18

A. Yes.

19

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Q. And if one proceeded further
down the south corridor, would you encounter as
well a set of general elevators?

21

A. Yes, and the stairs.

22

Q. And the stairs. Where does
the stairs lead to?

23

24

A. The corridor along the

25



laboratory is on the third floor and Ward 5A on the fifth floor.

Q. All right. Other than the three stairways that we have just spoken about and the two elevators that we have just discussed, was there any other way that one could physically enter 4A or 4B during that nine-month period?

A. Can you say it again?

Q. Okay. We have talked about three stairways.

A. Yes.

Q. One on Ward 4A, one on Ward 4B and one to the south of the south corridor.

A. Yes.

Q. We have talked about two elevators; one elevator on the south corridor and a bank of general elevators further south. Other than those facilities, was there any other way that one could physically enter Wards 4A or 4B?

A. There is a doorway here that goes out into the Cardiology Department.

Q. You are pointing to a doorway on Ward 4B at the far east corridor?

A. Yes.

Q. All right. And was there a



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similar doorway on Ward 4A?

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A. No, that was the external

4

wall of the Hospital.

5

Q. All right.

6

A. Coming down this way there

7

was only an open area by that bank of elevators

8

and then you entered the other wards on the other

9

end of the Hospital.

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Q. Now, when you say other wards

11

at the other end of the Hospital, I take it Wards 4A

12

and 4B were located at one end of the fourth floor?

13

A. Yes.

14

Q. What was located at the other

end?

15

A. 4C and 4D.

16

Q. And did they as well

accommodate cardiology patients?

17

A. Primarily they were medical

18

infants. They sometimes took overflow cardiology

19

patients.

20

Q. If a parent or a non-parent

21

visitor wished to see a patient on Ward 4A/4B

22

would it be the usual practice that they would

23

utilize the elevators on the south corridor?

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A. Yes.

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Q. All right. What was the elevator located immediately in front of the nursing station designed for, what was it used for?

A. Primarily it had access to the operating room. It also, the operating room was on the second floor and also on the ground floor I think it had access to the Emergency Department so that when we needed the emergency cart brought up it could come directly up that elevator.

Q. When a nurse reported for duty, or a registered nursing assistant on either Ward 4A or 4B, was there any particular rule or practice as to which access point they were to use or could they use any of the stairways or any of the elevators?

A. We were not supposed to use the operating room elevator at least during the daytime, I think we did sometimes at night. No, there was no rule other than that.

Q. All right. The evidence to date before the Commissioner, Ms. Costello, suggests that each of Wards 4A and 4B had their own emergency resuscitation cart, it has been called a crash cart as well. Was there a designated place on Ward 4B where that crash cart was to be



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kept when not in use?

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A. By designated we chose it
ourselves, is that what you mean?

5

6

Q. All right. Where was the
place where it was normally kept?

7

8

A. Just inside a storage room
which is labelled Linen 4, 28 I think.

9

10

Q. And was the cart kept there
as a matter of practice when it wasn't in use in a
patient's room?

11

12

13

A. Yes, unless we anticipated
use and then it could have been in the corridor
outside a room for which we had concerns.

14

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Q. And what about on Ward 4A,
was there a particular place where the crash cart
was kept on that ward?

17

18

A. They kept it in a little
niche in the corridor wall that you can see near 419.

19

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21

Q. I'm sorry, next to Room 419?

22

A. Yes.

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Q. All right. And once again
was it kept there when not in use?

A. Yes.

Q. And that room, it was not
kept in Room 419 itself but immediately adjacent to it?



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A. Yes.

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Q. Was there as well on Ward 4B,
Ms. Costello, an extra supply cart that was kept
on the ward?

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A. There was a supply cart of
sterile equipment from central supply room and there
was a cart containing linen, both of those were
exchanged regularly.

10

11

Q. Did the supply cart contain
any medications for use either during normal duties
or during a cardiac arrest?

12

13

A. No.

14

15

Q. All right. And similarly
was there a supply cart of that kind located on
Wards 4A?

16

17

A. No, it was shared, both were
shared.

18

19

Q. And was the supply cart
normally kept on Ward 4B?

20

21

22

A. Yes.

Q. And was there a specific
location or could that be placed anywhere where
there was room?

23

24

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A. No, the linen cart stayed in
where it says Linen 428 and the sterile supply cart



1
2 stayed in the clean utility room which is 432.

3 Q. And I take it that the linen
4 cart was shared as well?

5 A. Yes.

6 Q. All right. Where was infant
7 formula kept on Ward 4B?

8 A. The prepared formula which
9 was by a special recipe for specific patients was
10 kept in the refrigerator in the pantry which is 416
11 I think and the formula that was bought already
12 prepared from the National Baby Food Company was
13 kept, it did not need refrigerating, so, it was
14 kept on a cart where the linen was in 428.

15 Q. And on Ward 4A was there a
16 specific spot or room where infant formula was
17 kept or were the two rooms you have just described
18 shared between the two wards?

19 A. Yes, they were shared.

20 Q. All right. As between Wards
21 4A and 4B, Ms. Costello, was there one ward which
22 received routinely younger patients and one which
23 took older patients?

24 A. Because 4A had capacity for
25 12 infant beds routinely they generally took more.
Their census was not always 12 and 4B's census was



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not always 6. But the tendency was for the 12 infant beds on 4A they did generally have more younger patients.

Q. Was there any distinction drawn between the two wards as to which was to receive the more gravely ill patients, whatever their age?

A. No, there was not.

Q. In the nine-months which we are concerned, was it your impression that sicker patients were being assigned to one ward in preference to the other?

A. Definitely it was not in the way that we choose the admissions by where is there an empty bed, where will they fit or does this child and mother know the staff of one ward versus the other. So, when they were admitted there definitely was not.

Q. Other than the rooms designated for a particular patient on admission, during the nine months which we are interested in, did you have the impression for any reason that sicker patients or the more gravely ill patients were located on one ward in preference to another?

A. I worried about this when I



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realized that more children were dying on 4A than on 4B, then I wondered if this could be the cause and how it could come about. I didn't have any facts to say that they were, I just thought of it as one possibility of why they were having more cardiac arrests and deaths than 4B.

Q. All right. Well, perhaps I will come back to that.

Did you, Ms. Costello, as head nurse on Ward 4B generally regard the patients that were located in Room 431 as being more gravely ill or sicker than the patients located in the other rooms on Wards 4B?

A. Not necessarily but if there were a choice to put a more ill patient in that room we definitely would and the younger patients were there, they were more at risk because of age, regardless of condition. But if we had an older child that was quite ill, he couldn't fit in the infant room, so, he wouldn't be there.

Q. I take it then that if a very sick infant were admitted to Ward 4B, if space permitted it he would be placed in Room 431.

A. Yes, even if the space didn't permit we would likely move someone else so that he



1
2 would be.

3 Q. All right. And if an older
4 child who was also gravely sick was admitted, he
5 or she would not be placed in Room 431?

6 A. No.

7 Q. All right. Apart from the
8 entries in the ward beds on the two wards following
9 the relocation to Wards 4A/4B and apart from the
10 introduction of a second head nurse, were there any
11 other changes that followed upon the relocation
12 that you considered significant in terms of nursing
concerns?

13 A. The nursing staff was all one
14 when we were on 5A. It was divided between 4A and
15 4B, Liz and I did that arbitrarily, thinking of a
16 good balance for work load, of competency,
17 experience, compatibility of people. We didn't
18 move randomly one person 4A, one person 4B but we
tried to move all teams together.

19 Q. All right. When you say
20 that the nursing staff were divided, were the
21 teams in fact constituted?

22 A. No.

23 Q. Were the members of the teams
24 changed when you relocated?
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A. No, I think I tried to say that that is what we tried not to do. It may have happened occasionally but basically we tried to move the team that existed together to one ward.

Q. Who was responsible on relocation, Ms. Costello, for assigning various nurses to specific teams?

A. Liz Radojewski on 4A and myself on 4B.

Q. After the new assignments had been made, can you help me as to who the team leaders were on Ward 4B?

A. Karen Power, Bertha Bell, Patty Wigmore, Leah Talangbayan.

Q. I'm sorry?

A. Leah Talangbayan and that is T-a-l-a-n-g-b-a-y-a-n.

Q. Were there any others?

A. No.

Q. Do you know who the team leaders were on Ward 4A following the relocation?

A. Yes. Do you mind if I look at my notes?

Q. Not at all, just go ahead.



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A. At the time immediately after
the move there were Barbara Griffin, Susan Arbour.

THE COMMISSIONER: Sorry?

THE WITNESS: Susan Arbour, A-r-b-o-u-r.

THE COMMISSIONER: Yes.

THE WITNESS: Carol Nicholson,
Phyllis Morin.

MS. CRONK: Q. Any others?

A. Not at that time, but there
were changes over the period.

Q. When you are referring to
Phyllis Morin, is that the maiden name of Phyllis
Trayner?

A. Yes, it is.

Q. All right. And were any changes
made to the team leaders over the summer of 1980 on 4A?

A. Yes.

Q. Will you tell us, briefly, what
the changes were?

A. Barbara Griffin left early around
the end of April. Carol Gatza who was team leader
briefly, then Marie Mandal became team leader.

Q. When did Ms. Mandal become team
leader?

A. July 11.



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Susan Arbour left March 20, 1981.

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Joan MacIntosh became team leader of that team.

4

Q. When was that?

5

A. March 20, 1981.

6

Q. Was Kathy Shilton a team leader on Ward 4A at any time during that month?

7

A. Yes.

8

Q. When did she become team leader?

9

A. Early June when Carol Nicholson left.

10

11

Q. Was she still team leader in March of 1981?

12

A. Yes.

13

14

Q. Were there any other changes to the identity of the team leaders during that period?

15

A. No.

16

17

Q. I neglected to ask you this, Ms. Costello: you told me who the team leaders were on Ward 4B after the relocation. Did the team leaders change in the months that followed after relocation?

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A. No.

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Q. All right. So that the four women that you indicated as team leaders during that period were team leaders for the entire period of July 1980 through March 1981?

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A. Yes, they were officially, I guess. You would have to understand that if someone had days off or vacation other people acted as team leader.

Q. That led to my next question, Ms. Costello.

Was there a difference in terms of responsibility and position on the wards between what has been described as an acting team leader versus a team leader per se?

A. No. The difference was in salary.

Q. Amongst the four women that you have outlined for Ward 4B, Karen Power, Kathy Wigmore, Bertha Bell, Leah Talangaboyan were all of those four women team leaders or were they acting team leaders?

A. Karen Power was acting. I think that the other three were team leaders.

Q. Are you sufficiently familiar with the team leaders on 4A to give us the same breakdown?

A. No.

Q. Perhaps we will reserve that for Mrs. Radojewski.



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A. Please.

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A. Yes.

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Q. Were the teams paired in any specific way, Ms. Costello, so that the same team on Ward 4B, for example, generally worked opposite to the same team on Ward 4A during the same shift?

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Q. All right. Could you explain for us, please, which teams were paired together in that fashion?

A. My memory isn't good enough for most of them and I have also talked with Liz Radojewski to see if we could delve that out, and we don't remember.

14

15

We do know that Bertha Bell's team and Phyllis Trayner's team worked at the same period of time generally.

16

17

18

Q. All right. Did Karen Power's team work opposite a specific team on Ward 4A as best you can recall it?

19

20

A. It may have been Marie Mandal's, but my memory doesn't give me confidence on that.

21

22

Q. Am I correct that one team was assigned to each ward per shift?

23

24

25

A. Yes.

Q. All right. So that if Bertha Bell's



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team was on duty on Ward 4B on any given shift
generally Phyllis Trayner's team would be on duty
at the same time on Ward 4A?

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A. Yes.

6

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Q. Am I correct, however, that
the individual members of those teams might not be
the same from night to night?

8

A. Yes.

9

10

Q. Obviously some of the nurses
had evenings off or days off?

11

12

13

A. Most of the team had them
consistently off together, but not always, and they
may have switched shift or had extra days off.

14

Q. In the case of unexpected
illness, for example --

15

A. Yes.

16

17

18

Q. -- a particular member of
either Bertha Bell's team or Phyllis Trayner's team
would be replaced I assume by another nurse?

19

A. Yes.

20

21

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Q. And similarly for periods of
vacation were the team assignments arranged in such
a way so that the entire team was on vacation at the
same time?

23

A. No.

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Q. So that individual team members would be on vacation when their other team members were working on the ward?

A. Yes. There were other variations too. Like if we did not need the total team, one person could have gone out relieving to another ward.

Q. I will come back to the matter of relief nursing in a moment, Ms. Costello. But just quickly before the lunch break other than the changes that you have already outlined that followed or resulted after the relocation of the cardiology unit to Wards 4A/4B, were there any other changes which you felt had particular significance for the nursing staff?

A. Yes, because of more infants we now had two team leaders on nights where we had run 5A with one on nights.

We needed more night staff so that their rotation changed from two weeks of days and four of nights to two weeks of days and two of nights.

Q. On an alternating basis?

A. Yes.

Q. And was that true for each of the nursing teams on 4B and 4A?



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A. Yes.

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Q. Were there any other changes in

4

terms of staffing or staff hours?

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A. No.

6

Q. All right. Did, for example,

7

any of the 4A or 4B nurses leave the employ of the

8

Hospital following the relocation? Did you lose

9

nurses as a result of that move?

10

A. Yes, we did.

11

Q. Do you recall who left after the

relocation?

12

A. I need another list, please.

13

Q. All right. Well, perhaps --

14

MS. SYMES: Well, I have --

15

MS. CRONK: Perhaps having regard to

16

the time, Mr. Commissioner, if I could discuss it with

Ms. Symes?

17

THE COMMISSIONER: Yes. All right.

18

Just one thing: Mr. Sopinka, I have

19

heard that you are going to make some representations

20

this afternoon. Now you don't have to but I just

21

wondered if you would like to give some indication

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so that anybody who is interested will make a point

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of being here. I don't know if you want to. If you

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don't want to, you can wait.

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MR. SOPINKA: Unless I can solve it
before then.

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THE COMMISSIONER: I don't think you
will be able to resolve it. Some people may have
some --

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MR. SOPINKA: I wonder if my friend
can indicate how long she intends to be in her
examination in chief?

8

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MS. CRONK: All of the day.

10

11

THE COMMISSIONER: All the day and
probably into the --

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13

MR. SOPINKA: I may be making
representations, and I think most of the people that
are interested are aware of it.

14

15

THE COMMISSIONER: All right.

16

MR. SOPINKA: That may depend on my
conversation with my learned friend.

17

18

THE COMMISSIONER: All right. Then
we will just wait and see.

19

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MR. SOPINKA: Yes. I think if anybody
wants to be safe, if they are interested in the
representations that I am going to make, they would
be better to be here at 2:30.

22

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THE COMMISSIONER: Well I will be
here at 2:30 anyway. I promise you that.

24

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K.9

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MR. SOPINKA: I am very grateful. You
are very loyal.

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THE COMMISSIONER: All right. Until
2:30 then.

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MS. CRONK: Thank you, sir.

6

THE COMMISSIONER: We will see what
happens.

8

--- Luncheon recess.

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--- on resuming at 2:45 p.m.

4 THE COMMISSIONER: Before we start,
5 I think I am going to say something about the
6 meeting which turned out to be a private meeting
7 between Mr. Sopinka, Mr. Brown, Ms. Cronk and myself.
8 Others were invited but apparently weren't told
9 where, so that made it difficult to get there.

10 What we have decided to do is this:
11 A question has arisen as to the admissibility of
12 certain evidence by this present witness, and it
13 is based upon a statement that she gave to the
14 police and certain evidence that was to be found in
15 the notebooks of the police.

16 I intend to hear an argument in
17 camera as to whether or not that evidence should be
18 led and, of course, you can't argue if you don't
19 know what the evidence is, and as a result of that
20 Ms. Cronk has promised to give it to all counsel
21 who don't have that evidence, it being fully under-
22 stood, of course, that until the decision, and per-
23 haps after it, you will not reveal the contents
24 of it because the whole argument would be pointless.

25 The argument is to take place on
Monday morning at ten o'clock. I can't tell you
where because I haven't had a chance to see where we



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can go. And I have to say for the benefit of everybody who doesn't understand what "in camera" means (and I don't know why they should; it doesn't make any sense) it means without cameras and it means without the presence of the public or the press because obviously it doesn't do any good to keep out inadmissible evidence if everybody knows what the evidence is.

Now has anybody any comments on that? I would be happy if it would be passed on to the people who are not represented at the moment about what is happening so they will be available on Monday morning.

Yes, Ms. Symes.

MS. SYMES: Yes, Mr. Commissioner. Am I also to understand that there will also be the issue as to whether or not the substance of the material will be heard at this particular part in this Phase I or must be reserved to Phase II?

THE COMMISSIONER: Well, you can bring that up, but that doesn't have to be in camera. We can certainly discuss that openly.

My view would be that these are your clients that are being called. We are very close to Phase II at the moment, and I would certainly



1
2 think that the sensible thing would be to hear it
3 even if it is arguably in Phase II rather than
4 Phase I. But if you have an argument, when it comes
5 up, I think the time to present it is right then.
6 That argument, I don't see any reason why that
7 should be in camera.

8 MS. SYMES: I am not sure exactly
9 what my position is with respect to that except that
10 I understand that other people will be making
11 submissions with respect to that.

12 THE COMMISSIONER: Yes, but they
13 can make it -- we won't be hearing that at ten o'clock.
14 We will be hearing that when it is tendered and
15 people will say why it should or should not be
16 received at this time but later.

17 The question that we are dealing
18 with now, that we will be dealing with on Monday,
19 is evidence that arguably should never be heard at
20 all.

21 MR. TOBIAS: Mr. Commissioner, as
22 tomorrow is a non-sitting day, it might be helpful
23 if Ms. Cronk could give us some idea --

24 THE COMMISSIONER: She is going to --

25 MR. TOBIAS: -- will give us some
idea when the material would be ready.



1
2 THE COMMISSIONER: This afternoon
3 she says.

4 MS. CRONK: At 4:30.

5 MR. TOBIAS: Thank you.

6 THE COMMISSIONER: All right. Any-
7 thing else?

8 MS. SYMES: Mr. Commissioner, just
9 to understand then, the materials that are being
10 given are given under the same strictures as the
11 Atlanta Report I presume?

12 THE COMMISSIONER: Yes. And are
13 not to be released to anyone. It is a question -
14 I hate to say this - for legal eyes only until such
15 time as the evidence is, and it may not be, tendered.

16 All right. Then if you will just
17 turn up on the 22nd floor on Monday at ten o'clock
18 we will by that time know where we will have the
19 argument.

20 MS. CRONK: Thank you, sir.

21 THE COMMISSIONER: Yes. All right,
22 Ms. Cronk.

23 MS. CRONK: Miss Costello.

24 MARY COSTELLO, Resumed

25 DIRECT EXAMINATION BY MS. CRONK (Continued):

Q. Miss Costello, before we



1
2 broke for lunch I had asked you whether or not as
3 a result of relocation of the cardiology unit to
4 Wards 4A/4B the unit had suffered the loss of any
5 nursing staff, or alternatively, whether any new
6 nursing staff had been hired to accommodate that
7 change?

8 Over the luncheon break you were
9 kind enough to provide me with three forms of
10 summaries which you prepared. The first is
11 entitled "Staffing Budget". The second is entitled
12 "4B Vacancies By Week", and the third is not
13 entitled but it appears to be a summary of the
14 nursing staff members hired and those who resigned
15 from Wards 4A and 4B over the nine-month period.

16 THE COMMISSIONER: Are they all --

17 MS. CRONK: Three separate ones,
18 sir.

19 THE COMMISSIONER: You want three
20 separate numbers?

21 MS. CRONK: Yes, I think we should.

22 THE COMMISSIONER: All right. The
23 first one then is Staffing Budget".

24 THE REGISTRAR: 330.

25 THE COMMISSIONER: "4B Vacancies
By Week", 331 and the third?



1
2 MS. CRONK: Summary of new staff
3 for Wards 4A and 4B, sir.

4 THE COMMISSIONER: 4B Vacancies is
5 331 and the staff, staff changes, or what do you
6 call the third one?

7 MS. CRONK: That is fine, sir.
8 Staff Changes, Wards 4A and 4B.

9 --- EXHIBIT NO. 330: "Staffing Budget".

10 --- EXHIBIT NO. 331: "4B Vacancies By Week".

11 --- EXHIBIT NO. 332: Summary of Staff Changes,
12 Wards 4A and 4B.

13 MS. CRONK: Q. Were these summaries
14 prepared by you?

15 A. Yes.

16 Q. Could we start with the
17 first one, the one that is entitled "Staffing Budget",
18 and could you help us, please, as to the nature of
19 the information set out on this exhibit?

20 A. This was the change in the
21 budgeted staffing from when we moved to 4A/B from
22 5A.

23 We had 27 RNs and gave up one RN
24 position in order to gain three RNAs and .5 of a
25 clerk. So from 27 RN we went down to 26. From
26 8 RNA we went up 3 to 11. We had 1.5 unit clerks



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2 on 5A and we gained .5 clerk to make 2 when we came
3 to 4A/B.

4 Q. Perhaps the most compelling
5 and first question, Miss Costello, is how does one
6 gain .5 of a ward clerk?

7 A. When we were on 5A we shared
8 an evening clerk with 5B, which was another budget.

9 Q. I see.

10 A. But since 4A/B -- they
11 were separate budgets, but if you think of them
12 together as a cardiology budget we had two whole
13 people.

14 Q. Do I take it then as a result
15 of the relocation to Wards 4A and 4B in summary you
16 were down 1 Registered Nurse staff member, but you
17 had three additional Registered Nursing Assistants
18 that you had not previously had and effective the
19 beginning of April you had two full-time ward clerks
20 assigned to those wards?

21 A. That was my error. It was
22 three ward clerks. Other than that, yes, but that is
23 on paper, and that is budget planning, but people
24 were not actually hired immediately.

25 Q. They were hired subsequently?

A. Yes.



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Q. I see. Could we deal then
next with the summary entitled "4B Vacancies By Week".

A. Yes.

Q. Could you help me, please,
as to the nature of the information you set out here?

THE COMMISSIONER: Sorry, before we
leave 330, do I understand that figure should be 3
unit clerks instead of 2? Is that correct?

THE WITNESS: Yes, I guess it should
be. Wait a minute until I think. 2.5 when we were
on 5A and 3 when we were on 4A/B, sir.

THE COMMISSIONER: It was 2.5?

THE WITNESS: Yes.

THE COMMISSIONER: And it then became
3?

THE WITNESS: Yes.

THE COMMISSIONER: All right.

MS. CRONK: Thank you for that,
Miss Costello.

Q. And then dealing with the
4B Vacancies summary.

A. I looked at this because of
some implications by doctors here I think that we
were short-staffed during this time. We really
weren't very short-staffed in numbers, but where the



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2 shortage was that experienced nurses left and
3 experienced nurses were not available to be hired,
4 so that the people who were replacing experienced
5 nurses who had left were, some of them, very new
6 graduates with no experience, and none of them
7 with considerable experience in pediatrics or
8 cardiology.

9 Q. Do I take it then that this
10 summary reflects week-by-week the vacancies of
11 Registered Nurses that applied on Wards 4A/4B for
12 the entire period of July 1980 through to the end
13 of March 1981?

14 A. And it would RNAs except
15 that we on 4B didn't have any vacancies, I don't
16 have this information for 4A. This is just 4B.

17 Q. I'm sorry, for 4B, right.
18 And with respect to 4B where you
19 have a zero indication under "vacancy", does that
20 mean you had your full complement of Registered
21 Nursing staff?

22 A. Yes.

23 Q. And when you have "2", for
24 example, there were two positions vacant at that
25 given time?

A. Yes.



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Q. And if we look then finally, Miss Costello, to the third exhibit, the summary of those hired and those who resigned, I take it this applies both to Ward 4B and to Ward 4A?

A. Yes, I have itemized them separately.

Q. Could you deal first with the information you have provided concerning 4B and explain to the Commissioner what you have set out.

A. Including names?

Q. I suggest just in terms of what your intent was in preparing the summary.

A. It was to look at who left, were they experienced, were they replaced by new, inexperienced people, how long was there a vacant period before they were replaced by anyone, how many people did leave, were these experienced people.

Q. All right. Looking first then if we could at the information which appears above the line on page 1 with respect to 4B, do I have it correctly that those individuals listed on the right-hand side of the page were members of the Ward 4B nursing staff who resigned or left the ward at the times indicated beside their names?



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A. Yes. The only exception where I have written beside the top two part-time means that those two persons took one position so that they were still working there but only part-time and there was one position vacant.

Q. All right.

A. Other than that they left the ward.

Q. And if we look to the names that appear on the left-hand side of the page, again at the top, the names of those individuals indicate the individuals who were hired to replace those who had resigned at the times indicated?



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A. Yes, and the only exception there is one of the part-times became full-time when the other part-time left.

Q. Based on my examination of those who are listed as having resigned, Miss Costello, if we look at the dates, I take those dates to be the effective dates of their resignation?

A. Yes.

Q. Am I correct then that six Registered Nurses left Ward 4B in the nine-month period with which we are concerned?

A. Yes.

Q. And similarly if we look to those who were hired, it appears there were six Registered Nurses hired again in the period with which we are concerned to replace those who had left?

A. Yes.

Q. And as well there was one individual described as a "PRN", can you help me as to what that means?

A. "Pending RN", that means that individual had just graduated and had not yet received the results of the registration examination for a nurse.



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Q. So to the extent that that person had not yet become fully qualified as a Registered Nurse, your complement over the nine-month period was up by one?

A. Up by one?

Q. Yes, six resigned; six were hired to fill those positions; and in addition you had an extra individual the one you have described as having the Registered Nursing Certificate on a pending basis.

A. I don't think I counted that one.

Q. To assist you, of those who were hired during our period that would appear to apply to Miss Halpenny.

A. Yes.

Q. To Miss Kee.

A. Yes.

Q. Miss Reaper.

A. Yes.

Q. Miss Harwood Jones.

A. Yes.

Q. Miss Wigmore and Miss Whittingham, and that is the period July 1980 to March 1981.



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A. I think we are getting tangled up, because if you consider Mrs. Wigmore hired then I don't think when you counted six resignations that you considered the two who went on part-time, one of whom was Mrs. Wigmore.

Q. Oh, I see, I am sorry. I took it by virtue of the difference in initials that they were two different people, but that is not correct?

A. It should have been a "P" on the left.

Q. They are not two different people?

A. No.

Q. So in that respect then your complement after the new individuals were hired was exactly the same as it had been before the resignations?

A. Yes.

Q. If we deal then with the information set out at the bottom of the page, described as "new positions, budget approval June 3, 1981", as I read it there were four new positions created and four individuals hired to fill those positions, but none within the time period with which



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we are concerned?

A. No. And none immediately when the budgeted position became available, that took a few months to find them.

Q. Was one individual however Miss Berg, a Registered Nurse who appears to have started on the ward on January 4, 1981, do I have that correctly?

A. Yes.

Q. So in that sense that was a new position and a new Registered Nurse who was introduced to the ward at that time?

A. Excuse me, I don't know if that is a misprinting and it should say 1982.

Q. Perhaps you can check that at the break this afternoon, Miss Costello.

A. Yes.

Q. And you can simply let us know if it is a misprint and it should read 1982. It would mean that no additional Registered Nurses started on the wards during the time period that we are concerned with, on Ward 4B?

A. No additional number.

Q. That's right?

A. Yes.



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Q. And if we turn to the next page dealing with Ward 4A --

A. Yes.

Q. -- the information set out under the "hired" column I take it again there is an indication of those individuals who were hired, that is effectively on the dates set out beside their names, over the time period that we are concerned with?

A. Yes. I have extended this beyond that period.

Q. Well, indeed if we look at it it appears there was one Registered Nursing Assistant, and only one Registered Nurse who was hired for Ward 4A during the period July 1980 through to the end of March 1981, that is Miss Brownless and Miss Buchanan, is that correct?

A. Yes.

Q. And if we look at the new positions that you have set out on the bottom that received budget approval, in the column of "new positions" it appears that there were seven. They were ultimately approved but none of those individuals started to work on 4A in the period with which we are concerned?

A. No, and the budget approval



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2 only came after the period with which we are con-
3 cerned.

4 Q. If we look at the resignations
5 from Ward 4A, that information is set out at the
6 bottom of this page and as well on the top of the
7 next page. Am I reading the information correctly
8 that three Registered Nurses left during the
9 period July 1980 through to March 1981 from Ward 4A
10 and no Registered Nursing Assistants left?

11 A. Yes. One position was lost
12 by the fact that two individuals assumed one posi-
13 tion, each working part-time.

14 Q. Do I have it then that three
15 Registered Nurses left, one was hired, no Registered
16 Nursing Assistants and one was hired?

17 A. Yes.

18 MS. CRONK: Thank you, Miss
19 Costello.

20 MR. BROWN: Mr. Commissioner, perhaps
21 instead of going into this in cross-examination,
22 this morning Miss Costello said a Nurse Arbour
23 left on March 20, 1981, the reference on 4A is to
24 a Nurse Fitzgerald.

25 THE WITNESS: She was Fitzgerald
at that time, I'm sorry. Her married name later was



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Arbour.

MR. BROWN: Thank you very much.

MS. CRONK: Thank you, Mr. Brown.

Q. Miss Costello, if we can turn to a new matter, that is the issue of nursing assignments. Can you tell me please was there a system in place on Wards 4A/4B again during this nine-month period for the assigning of particular patients to any given nurse? How did it come about that a nurse received an assignment for particular children?

A. On what basis did we select? Is that what you are asking me?

Q. Yes.

A. Competency of the nurse; perhaps education and further experience of the nurse.

Q. Whose responsibility was it, Miss Costello, to make those assignments?

A. Either the Head Nurse or the team leader.

Q. When was that done on any given shift?

A. It was done during the day for all of the shifts, but when the new shifts came



1
2 about if conditions were altered, like the workload
3 changed for the reason of more or less children,
4 or a change in their condition, then it could be
5 altered at that time.

6 Q. Then as part of your normal
7 duties during the day, Miss Costello, would you
8 normally work out the assignment sheets both for your
9 own day shift and the night shift that was to
10 follow?

11 A. Yes.

12 Q. If upon reporting for duty
13 for the night shift the team leader found there were
14 additional patients or, in reviewing the assignment
15 list, felt it should be changed in any way, did the
16 team leader have the authority to do that without
17 consulting you?

18 A. Yes.

19 Q. When would the nurses who
20 were assigned for duty to the night shift learn the
21 identity of the particular patients to whom they
22 had been assigned?

23 A. When they came on duty.

24 Q. Was there ever a situation
25 where the assignment lists were prepared several
days in advance of any given night shift?



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A. No.

3

Q. So do I take it then that

4

in the normal situation it would not be possible

5

for a nurse who was assigned for night duty to know

6

which patients she would be caring for in advance

7

of her reporting for duty?

8

A. No.

10

Q. We have heard evidence as
well concerning the concept of constant care nursing,
Miss Costello. Whose responsibility was it to
assign constant care nursing for a patient, for
example, on Ward 4B?

12

13

A. Theoretically the doctor
who has ordered constant nursing care, but the
nurses did implement it and sometimes they would
implement it without an actual doctor's order but
with discussion with the doctors.

14

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16

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Q. Could any nurse on 4B do
that?

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19

A. It would be the nurse in
charge.

20

21

Q. I'm sorry?

22

A. Or the Head Nurse or the
team leader.

23

Q. During the day that would be

24

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yourself?

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A. Yes.

4

Q. And at night that would be

5

the team leader?

6

A. Yes.

7

Q. If constant care nursing

8

was in fact assigned concerning any particular

9

patient, was it required that that be recorded in

10

the books, the nursing books that were kept on

11

Ward 4B?

A. We were required to write it

12

in the assignment book and on the timesheets.

13

Q. Were there ever situations

14

of which you are aware where constant care nursing

15

was ordered, or at least implemented with respect

16

to a child without prior consultation with a

17

physician?

A. No, I don't think so.

18

Q. If a team leader on the

19

night shift felt that constant care nursing was

20

required or desirable, having regard to any particular

21

patient's condition, would she be in a position

22

where she could implement constant care nursing

23

without first having spoken to a doctor?

24

A. She could change -- alter the

25



1
2 assignment, she probably wouldn't officially do
3 constant nursing care for this patient, but she
4 could alter the assignment so that someone else
5 took more patients and one nurse had fewer, or
6 perhaps one. She could do this within her complement
7 of staff on the ward. She had the freedom to do it.
8 If she required more staff than she had on the
9 ward in order to do this she would have to consult
10 with the supervisor as well.

11 Q. With the nursing supervisor?

12 A. Yes.

13 Q. Could Registered Nursing
14 Assistants be charged with constant care responsi-
15 bilities?

16 A. No.

17 Q. Was it only Registered Nurses
18 then?

19 A. Yes.

20 Q. And as a matter of course
21 was it in your view the more experienced nurses on
22 Wards 4B or 4A who were charged with those duties?

23 A. Yes. It usually was, but
24 when people were gaining their experience the only
25 way they learned to do it was to do it. They would
not do it on their own.



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Q. If it were your choice during the day, however, to assign a particular nurse constant care nursing duties in the normal course would you choose your most experienced nurse who was then on duty?

A. I think what I am trying to say is, yes, but then I would never get anyone else to have that experience and be able to do it when this girl leaves. So that at some point you would also assign someone who is competent and with some supervision and help but is not the most experienced so she would also learn to do it.

Q. Thank you, Miss Costello.
You mentioned earlier this morning in the context of talking about the various members of the teams that existed on 4A/4B, the fact that nurses could be sent as relief to other locations in the Hospital or to other wards. Do I take it correctly that there were situations when, for example, a nurse from 4B would report for duty on the night shift only to find that she was being posted as a relief nurse to another ward in the Hospital?

A. Yes.

Q. Were there situations as well



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where the 4B nurse would report for duty to find
that she was being assigned for the night to Ward 4A?

3

4

A. Yes.

5

Q. Did that frequently happen?

6

A. Fairly frequently.

7

Q. And in reverse as well?

8

A. Yes.

9

Q. . 4A nurses serving as relief
on 4B?

10

A. Yes. Do you want the

11

reasoning?

12

Q. Yes, please.

13

A. The choice to send 4B nurses

14

to 4A or vice versa rather than to another ward
if there was a nurse needed there is that is their
area of competence, most competence.

15

16

Q. So if Ward 4B for example

17

required the assistance of another nurse would you
look first to the nurses available on 4A?

18

19

A. Yes.

20

Q. To provide that assistance?

21

A. Yes.

22

Q. Was it possible for a nurse

23

who was being assigned relief duty to know in
advance before reporting for work that she would be

24

25



1
2 assigned as relief to 4A, for example, if she was
3 a 4B nurse?

4 A. She would not know where she
5 was going. She might know that it was her turn to
6 go relieving. That was not a popular thing to do,
7 so they took turns with it, and she might know her
8 turn was coming up but she would not know where she
9 was going, and she might not think of that.

10 Q. It could be the cardiology
11 unit, cardiac ward or it could be any ward in the
12 Hospital?

13 A. That is correct.

14 Q. If a nurse was to be assigned
15 to relief duties, take our example of a 4B nurse
16 who has to serve as relief on 4A, could that happen
17 at any time during the shift, or as a matter of
18 course and routine did it only happen at the beginning
19 of the shift?

20 A. Routine would be at the
21 beginning of the shift, but if conditions changed
22 somewhere throughout the shift it could occur at
23 that time.

24 Q. Would I have it correctly
25 as well that if a nurse was assigned relief duties
they might be duties that were to apply only for



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a matter of several hours, such that she would
return to her own ward before the end of the shift?

4

A. Yes, that is possible.

5

6

Q. And again that would depend
on the condition of the patients for whom she
was being assigned?

7

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A. Yes, or the changed staffing
wherever she was assigned.

9

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Q. We have heard about -- I am
sorry?

11

A. Or both.

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Q. We have heard about relief
staff, Miss Costello, in another context as well,
and that is as it applies to constant care nursing.
Could you explain for us, we have had this evidence
from others and I would like your view as to what
you understood constant care nursing to entail.

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A. It means that a patient is
always attended by one nurse. If someone is assigned
to look after that patient on a constant care
assignment that person is the one who would do it,
but she could be relieved by someone so she could
have breaks.

22

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Q. Was there a particular
procedure that was followed to determine who would



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relieve a nurse that had been assigned constant
care duties?

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A. The team leader would select,
and the way that she would do it would be working
through the workload and assessing who could most
conveniently or most possibly do it.

5

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Q. Would that choice of the
relief nurse be made at the beginning of any shift
or was it made on an ad hoc basis, as for example
the break times arrived?

9

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A. More likely at the beginning
of the shift, but it is possible that it could be
made later.

12

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Q. At night I take it then the
choice of the relief nurse for a constant care nurse
is made by the team leader?

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A. Yes.

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Q. All right.

A. And she may even have chosen herself or she may not.

Q. Did it frequently happen that the team leader on duty for example on Ward 4B would serve as relief for those nurses who were doing constant care?

A. Yes.

Q. Was a similar situation on 4A?

A. Yes.

Q. All right. In a situation where a team leader had assigned either herself or someone else to relieve a constant care nurse was it required that that be noted in the assignment book for 4A or 4B?

A. No.

Q. Was any record kept in any other place or in any other form of document as to who had served relief for constant care nurses on a particular duty?

A. No, I think for a short period of time we had a trial of trying to code it with A relieves B, B relieves C, C relieves D, et cetera, but it wasn't very efficient and we didn't continue with it and we couldn't translate it very well now I don't think.



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THE COMMISSIONER: Well, when you say
a very short time, what period was that?

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THE WITNESS: Oh, I don't know, sir.

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THE COMMISSIONER: No, but would it
have been early?

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THE WITNESS: It probably was early
when we moved to the new ward and we were trying new
things.

8

9

MS. CRONK: Q. Do you recall now,
Ms. Costello, whether any record was kept or any
attempt made to keep a record of that for the period
commencing in July, 1980?

10

11

12

13

A. No, there was not.

14

15

Q. There was not, all right. Could
a registered nursing assistant stand in as relief
for a registered nurse who had been assigned constant
care duties?

16

17

A. Theoretically, no. She might
stay with the baby if there was a registered nurse
in the room but theoretically she would not be
assigned to relieve.

18

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Q. In practice did that happen?

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A. It might happen for a brief
period, if she were supervised, for example, if there
were an RN also in the room but it would not be
frequent.

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Q As I understand it, Ms. Costello, there were a number of authorized breaks for nurses who were, for example, assigned constant care duties, indeed, all of the nurses who were on duty at any particular night shift, there was I take it a number of coffee breaks?

A Yes. As I understand it now after having got a page out of the Personnel Policy Manual, there was an hour and 45 minutes allowed in a 12-hour shift and the nurses could use that how they liked, however many meal breaks or coffee breaks they wanted as long as there was safe and competent coverage for the patients.

Q Was there any set time at which the breaks were to be taken?

A No.

Q All right. Do I have it then correctly that no matter how many breaks they took, so long as the total time taken away from the patient did not exceed an hour and 45 minutes it was within any individual nurses discretion as to when she took those breaks?

A Yes, discretion including the care of the patients at that time.

THE COMMISSIONER: How did you police



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this, I don't know whether you did. It was an hour and 45 minutes, how would anyone know whether they were being relieved, how would you know how long anyone was taking unless the relief nurse complained?

THE WITNESS: Theoretically the team leader or me in the daytime would know but we didn't police it tightly.

THE COMMISSIONER: No, you just thought you would find out who was overstaying just automatically, would you?

THE WITNESS: If we put more effort into it we could have, it wasn't a high priority of things to put effort into.

THE COMMISSIONER: I am sure it would get around if somebody was going away for 15 minutes and coming back 45 minutes later.

THE WITNESS: If this became a habit of one individual, definitely, yes, it would get around and there would be group pressure as well as top pressure.

THE COMMISSIONER: I am told there are some judges who do that sort of thing too.

MS. CRONK: Q. It had been my understanding, Ms. Costello, that on a night shift on Wards 4A/4B there was one lunch or dinner break



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permitted and that it was to be taken between the
hours of 1 a.m. and 3 a.m. Is my information
inaccurate?

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A. I have to answer you from the
information I got from the Personnel Policy Manual
and someone who knew that well, I got that in the
last few days. Written in on the side it is written
as 15-minute coffee breaks in typing and as one 30-
minute meal break and one 45-minute meal break but
written in on the side that you can't read too well
it says 1 hour and 45 minutes and she told me that
that was at the discretion of the nurses, that they
could take it at any time and break it up into as
many pieces as they wanted.

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Q. Well, you have referred to the
Personnel Manual and your counsel has assisted me
by providing me with a copy of Sections 28.10 and
28.11. I take these to be sections from the Nursing
Manual?

19

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A. It is the Personnel Policy Manual
of The Hospital for Sick Children.

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Q. Are these the provisions that
you were referring to when you indicated that a nurse
could take an hour and 45 minutes in total for her
breaks on any given shift?



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A Yes, on any 12-hour shift.

THE COMMISSIONER: The exhibit will be
333.

--- EXHIBIT NO. 333: Personnel Policy Manual,
Sections 28.10 and 28.11.

MS. CRONK: Q And specifically were
you referring to the provisions of Section 28 Sub 11?

A I didn't reply to you in
relation to 8 hours, 7.75-hour shifts, no, I was
speaking in 11.6 or the 12-hour long day or long
night shift.

Q All right. So that the 1 hour
and 45 minutes applied if a nurse was assigned a 12-
hour shift duty?

A Yes.

Q All right. I appreciate that
the policy that is set out in the Personnel Manual
is as you have stated it to be, Ms. Costello. In
practice on Ward 4B during the nine-month period of
time with which we are concerned was there a set
time within which nurses were to take their lunch
or dinner break on the night shift?

A No.

Q All right. During the day shift,
similarly, was there a set time when you were on duty



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when they were to take their break?

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A. Day shift was a little more controlled in ours because of the hours that the cafeteria was open; we had no cafeteria at night.

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Q I take it then that there was a set time dictated only by the time during which the cafeteria was open?

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A. And by the fact that some people had to go early during the hours the cafeteria was open in order for everyone to be able to go before it closed.

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Q Apart from the actual policy reflected in the Personnel Manual, Ms. Costello, was there on 4B when you were head nurse there during this nine-month period a set time within which nurses were expected and required to take their coffee breaks?

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A. In the daytime?

Q No, I'm sorry, at night?

A. No, there wasn't.

Q All right. To the best of your knowledge then I take it the policy reflected in the Manual applied to Ward 4B and was followed on Ward 4B during that nine-month period?

A. Yes.

Q Similarly in a situation where



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a nurse was assigned to constant care duties, Ms. Costello, if she determined to take her 1 hour and 45 minutes at several different intervals, would it be required of her that she consult first with the team leader to ensure that someone was available to stand in as relief for her?

A. Yes.

Q. All right. Would she have to go through the team leader to make that arrangement or would she ask a nurse passing in the hall or a friend to step in for her?

A. Somewhere this has been discussed before and it would be a difference whether she is taking a 15-minute coffee break or a 3-minute bathroom break maybe. For a planned break, yes, she would consult the team leader; if she just wanted someone to stay for two or three minutes while she went to the bathroom she might call someone who was passing.

Q. And I take it that that happened on occasion both during the day and at night?

A. Yes.

Q. All right. Would I be correct as well that there would be occasions which would arise when a nurse from Ward 4A would assist or help out a nurse from Ward 4B in exactly that fashion by



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standing in for them?

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A. Yes, I would think so.

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Q. And vice-versa?

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A. Yes.

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Q. And am I correct that there was

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no record or monitoring of that kind of assistance
kept on the wards?

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A. No, there was not.

9

Q. During the same nine-month period,

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Ms. Costello, did any situation ever arise insofar

11

as you are aware where constant care nursing was

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requested for a patient on Wards 4A or 4B but could

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not be provided by virtue of the available nursing
staff on the ward?

14

A. No, but what could happen, we

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would hope that we would get extra nursing staff in

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order to provide it but if we could not what would

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happen is that the patient assignments for the nurses

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that were not looking after the constant care patient

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would become bigger by them taking some of the

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patients from the assignment of the nurse who would
have the constant care.

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Q. In order to free a nurse up to

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provide that kind of care?

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A. Yes.

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Q All right. Was there ever a situation that you can recall where it was ordered or considered desirable to provide constant care nursing and it was not possible to juggle the patients assigned to other nurses so as to permit it to be provided?

A No, I don't think so. It may have taken a little time to institute; not hours, minutes.

Q Did you yourself as Head Nurse on Ward 4B ever have a situation reported to you by a member of the nursing staff that worked the night shift that it had been considered appropriate for a patient to have constant care nursing and it had not taken place on the ward the previous evening?

A No.

Q All right. As you are probably aware, and I believe I mentioned earlier this morning, the Commissioner has heard evidence from Ms. Carol Browne, one of the clinical nurse specialists on Wards 4A and 4B concerning the various procedures which applied at the Hospital for the administration of medications. As Ward 4B's former Head Nurse, I take it you are familiar with the procedures that were in fact followed on your ward for the



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administration of medications?

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A. Yes.

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Q All right. Are you familiar as well with the procedures that were followed on Ward 4A for the administration of medications?

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A As far as I know they were the same.

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Q All right. As a practical matter, Ms. Costello, did registered nurses on Wards 4A or 4B during this nine-month period administer medications intravenously?

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A Yes, medications in a select way.

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Q All right. Can you explain what you mean by that?

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A Some medications were restricted that could not be given intravenously and any intravenous medication given by a nurse was put into the vacolitre or into the buretrol somewhere above the trip chamber on the intravenous line only.

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Q All right. Was digoxin one of the restricted drugs that could not be administered intravenously on Wards 4A/4B by registered nurses?

22

A Yes, it was.

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Q Could registered nursing assistants - I'm sorry, let me rephrase that. Did



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registered nursing assistants as a practical matter
administer medications intravenously at any time
to your knowledge on Wards 4A/4B?

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A. No, they did not.

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Q. All right. You indicated that
there were certain drugs that could be administered
intravenously by registered nurses on those two wards.
What kinds of drugs are you talking about, Ms.
Costello?

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A. The routine ones that we would
have used would be vitamins, antibiotics, potassium
chloride.

13

Q. What about gentamicin?

14

A. Yes, it is an antibiotic.

15

Q. Ampicillin?

16

A. Yes.

17

Q. Lasix?

18

A. Yes, occasionally.

19

Q. Are any of those drugs
administered by use of a syringe into the I.V.
apparatus?

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A. That is I guess the only way you
get it into it but nurses would put them in above the
drip chamber only.

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Q. But those three drugs for

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example, are examples of types of drugs that could be administered intravenously by a registered nurse on those wards so long as they did it above the buretrol or above the drip chamber?

A. Yes.

Q. All right. Did registered nurses on Wards 4A/4B routinely administer digoxin orally?

A. Yes.

Q. Were there any restrictions that applied on your ward with respect to the administration of digoxin orally by a registered nurse?

A. The child's apex was checked first and if it were significantly different from the recorded pattern for that child, either in rate or rhythm, there was consultation to the doctor before the digoxin was given. Another restriction is that two nurses checked the measurement of the dose of digoxin before it was administered.

Q. Okay. We have heard before and I suggest to you that there was no requirement that applied during those nine months for the second nurse to indicate in a written fashion that she had checked the dose of digoxin before it was prescribed or administered?

A. No, there was not.



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Q. Was the second nurse required to physically observe the first nurse administer the medication to the patient involved?

A. No.

Q. Was she required to physically observe the first nurse draw up and calculate the amount of the dose?

A. Yes.

Q. Was she required to herself duplicate the calculations to independently ensure that the correct amount had been drawn up?

A. Yes.

Q. In practice, Ms. Costello, during those nine months was there ever a situation that was reported to you or which you became aware wherein it was suggested that a registered nursing assistant had administered a medication to a child?

A. It is possible that a medication that was prepared by an RN could be handed to a registered nursing assistant who was feeding a baby or to administer it to that baby at that time.

Q. And are you aware of those situations arising during that nine-month period?

A. Yes, they did occasionally.

Q. And if it did arise were there



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any rules that applied as to how the registered nursing assistant would go about administering that medication? Were there any restrictions on her ability to do that?

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A. According to the Policy Manual the registered nursing assistants were allowed to give all medications but they very rarely did and it would only be in circumstances like that where they were holding or feeding the baby.

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Q Well, in that situation if it did arise where a registered nursing assistant was going to administer the medication, was it required that the registered nurse observe the administration of the drug?

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A. No, I don't think it was definitely required; it might have been preferable but if it was going to be a period of time she may not have always observed the administration.

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Q Well, if there was a situation then, Ms. Costello, where a registered nursing assistant had been caring for a child, was familiar with the child and although not in practice expected to administer medications, is it possible then that a registered nurse would prepare the necessary medication, provide it to the registered nursing



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assistant and she would then administer it whether
or not the registered nurse was there?

A. Yes, occasionally.

Q. All right. Is there any other
situation other than the one that you have described
which came to your attention where a registered
nursing assistant had administered medication to a
patient on your ward?

A. No.



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Q. During the same nine-month period, Miss Costello, that is July 1980 to March 1981, did you on any occasion observe a nurse or a registered nursing assistant administering a dose of digoxin intravenously to a patient on either of those two wards?

A. No, I did not.

Q. Did such an incident - was such an incident ever reported to you or did you learn of such an incident from anyone connected with the nursing or the medical staff of the Hospital?

A. No.

Q. I take it, Miss Costello, that apart from the rules and the guidelines that applied as to the administering of drugs that you are familiar as well with the forms in which they were available on Wards 4A and 4B. Is that correct?

A. Yes, I am familiar with them, but it is some time ago. I may not remember the exact dosages now.

Q. Can you help me first, Miss Costello, with the gentamicin? What form was it available on Wards 4A and 4B?

A. It was available in a vial and



1
2
3 it was given intravenously or intramuscularly.

4 MS. CRONK: Mr. Registrar, could
5 I see Exhibit 225, please?

6 Q. To the best of your knowledge,
7 Miss Costello, what form was ampicillin available
8 in on Wards 4A and 4B?

9 A. Available for intravenous
10 administration.

11 Q. What form did it actually
12 come in? Was it a tablet? Was it a liquid? Was
13 it in an ampule or vial?

14 A. A vial.

15 THE COMMISSIONER: I was getting
16 into that at one stage. Is there a difference an
17 ampule and a vial?

18 MS. CRONK: Q. Miss Costello?

19 A. For me there is. A vial has
20 a rubber stopper and perhaps multi-doses in it,
21 and an ampule, it is two pieces of glass with a
22 little ring where you split the top piece of glass
23 off and remove the medication from the bottom of
24 the vial with a needle and syringe. You would not
25 keep this to for multi-dose.

THE COMMISSIONER: Well, can we
show something --



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MS. CRONK: If we deal first with
gentamicin, sir.

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THE COMMISSIONER: Yes. Tell us
what you call it and I will look at it and see if
I can remember what it looks like.

7

8

9

MS. CRONK: I am not sure that
this is going to help you on the vial-ampule
distinction.

10

THE COMMISSIONER: All right.

11

MS. CRONK: But I will get to that.

12

Q. You told me I thought,
Miss Costello, that gentamicin came in a vial?

13

A. Yes.

14

Q. It was used intravenously?

15

A. Yes. It could be used intra-
muscularly.

16

17

18

19

Q. I am showing you a blue
capped and a red capped small bottle. They are
labelled gentamicin. Are those the vials that you
are referring to?

20

A. Yes.

21

22

Q. Is the form in which the
drug came?

23

A. Yes, they are.

24

Q. I hesitate to identify what

25



D4

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2

this is, is that a vial or an ampule?

3

A. That is an ampule.

4

Q. I am holding up an ampule of

5

furosemide.

6

Did not gentamicin come in an

7

ampule form?

8

A. I don't think so.

9

Q. And I ask you next about

10

ampicillin. Was it in the form of an ampule such
as the one that applies to furosemide that it came
in or was it a vial such as gentamicin came in?

11

12

A. A vial.

13

THE COMMISSIONER: Now can I just

14

see them so I will be able to tell which is which.

15

This stubby little bottle, that you call --

16

THE WITNESS: Sir, it doesn't

matter the shape of it.

17

THE COMMISSIONER: No.

18

THE WITNESS: But if you flip that

19

blue cap off there is a rubber stopper and you

20

would put a needle through there to get the medica-
tion out.

21

THE COMMISSIONER: What would

22

happen if I do this?

23

THE WITNESS: Nothing, sir.

24

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D5

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THE COMMISSIONER: I don't think
I can do it anyway. Yes, I did.

4

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THE WITNESS: There is a rubber
stopper so you could put a syringe and needle in
and remove part of that medication and the remainder
would stay sterile for another time.

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THE COMMISSIONER: And this one is?

THE WITNESS: That is a vial.

THE COMMISSIONER: And this one?

THE WITNESS: That is a vial the
same.

THE COMMISSIONER: They are both
vials?

MS. CRONK: Q. I'm sorry, is the
furosemide in a vial or an ampule?

A. It is in an ampule but he
had his hands on the two gentamicin.

Q. I beg your pardon.

THE COMMISSIONER: I know can't
get it back on. Can anybody?

THE WITNESS: I don't think it
matters. You won't be injecting it into anyone.

THE COMMISSIONER: No, - I give up.
I will hand this problem over to the registrar.
He seems to be able to solve --



DD6

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MS. CRONK: Sir, just before you
give you away --

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THE COMMISSIONER: All right. I
will give you both parts.

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MS. CRONK: Q. Do I have it
correctly then, Miss Costello, in your experience
what is properly described as a vial is a container
which has a stopper at the top into which a syringe
can be inserted to withdraw the drug?

11

A. The needle on the syringe.

12

Q. I'm sorry?

13

A. Is inserted through the
rubber.

14

15

16

Q. And in the case of gentamicin
as we have seen, two different concentrations of
the drug have different coloured tops to the vials.

17

A. Yes, and different labels.

18

Q. Was that the case as well
with ampicillin?

19

A. Yes.

20

21

Q. A different concentration
would come in a vial with a different coloured top?

22

23

24

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A. A powder - a specified amount
on the label would come in the vial with instructions
to mix with so much water to get a concentration of



1

2

1 cc or different amounts.

3

Q. I see. So that the ampicillin

4

in fact in its base form was a powder and then had

5

to be mixed?

6

A. Yes.

7

Q. But the powder itself came

8

in a vial?

9

A. Yes.

10

MS. CRONK: Can we, sir, before

11

I confuse this evidence more, take our break at this
time?

12

THE COMMISSIONER: Yes. But what

13

do you say is a distinction? This is obviously --

14

THE WITNESS: There is no rubber

15

stopper, sir. If you want to get into that you

16

break it at the most narrow spot.

17

THE COMMISSIONER: Why do you have

18

one or the other? What is the merit?

19

THE WITNESS: The merit of the

20

vial is that if you don't use all of the medication

21

in one dose it remains sterile and viable under
proper condition: --

22

THE COMMISSIONER: I see.

23

THE WITNESS: -- like refrigeration,

24

to be used --

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DD7



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DD8

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THE COMMISSIONER: But this, once
you have broken it you have to use it right away
or throw the rest away.

4

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THE WITNESS: Use it or discard
the remainder.

6

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THE COMMISSIONER: Is there some
merit in that? Do you want to have that? What is
the merits, I would like to know, of the ampule?
Is this more expensive, the vial?

8

9

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THE WITNESS: No, I can't answer
that. I am not sure whether it would be faster.

11

12

MS. CRONK: Q. Is one easier to
administer, Miss Costello?

13

14

A. No.

15

THE COMMISSIONER: You just live
with it, I take it, and you are trained, and so if
it happens to be in a vial, you take off the top
and put the syringe in, and if it happens to be an
ampule you break off the top and put the syringe
in and throw the remainder away?

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THE WITNESS: Yes.

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MS. CRONK: May we take our break
now, Mr. Commissioner?

22

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THE COMMISSIONER: Yes, yes. 15
minutes.

24

---Short recess.

25



DD9

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--- Upon resuming.

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THE COMMISSIONER: Yes, Miss Cronk?

4

MS. CRONK: Thank you.

5

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Q. Miss Costello, having made it abundantly clear why the nursing profession would never accept me, I'm going to try again.

8

9

10

Dealing first with ampicillin, you have told us that comes in what you have described as an ampule. It must be broken open - sorry, did I get that wrong?

11

12

A. The rubber must be punctured with a needle.

13

14

Q. All right. It is a vial with a stopper?

15

A. Yes, it is.

16

17

Q. And you have told us it is in a powder form?

18

19

20

Q. Right. How physically would

one remove the powder to then mix the drug to administer it to the patient?

21

22

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A. Do it backwards. You would put fluid in with the powder and shake it up so that it all became a liquid.

24

25

Q. I see.



DD10

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A. Homogenous liquid, and then
remove it.

4

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Q. I see. And would you use
a syringe and a needle to insert the liquid?

6

A. Yes.

7

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Q. Right. And then having
shaken it up you would use the same syringe and
needle or a different needle to withdraw it, or
would it matter?

10

11

A. Either. Some places say that
you should change the needle; some do not.

12

13

14

Q. All right. We deal now with
the drug heparin. What form did it come in on Wards
4A/4B?

15

16

17

A. It came in injectable, and
my memory doesn't tell me - I think in ampule but
I am not positive. In different strengths.

18

19

Q. And what about the drug Lasix?

20

21

A. It came in tablet form, in
suspension form for all and ampule form.

22

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THE COMMISSIONER: Sorry, did you
say suspension form?

THE WITNESS: Yes.

THE COMMISSIONER: What is that?

THE WITNESS: It is like a tablet



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but it is suspended in a liquid but is flavoured
so the children will swallow it when they can't
swallow a tablet.

MS. CRONK: Q. Did it also come in
an ampule form?

A. Yes, it did.

Q. You told us previously - did
it come in a vial form as well?

A. No, I don't think so.

Q. You told us that there were
a number of drugs, including, for example,
gentamicin and ampicillin, which could be administered
intravenously by a nurse on the cardiology wards.

A. Yes.

Q. And you told us as well that
in the normal course when a medication was drawn up
to be administered to a patient a nurse was required
to check the calculations that she had done for the
drug and to have it checked with a second nurse
before it was actually administered to the patient.
Do I have that correctly?

A. Not for all medications, no.

Q. For gentamicin was it required
that the drug be checked by a second nurse before
administration?



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A. No.

Q. For ampicillin was it required that it be checked by a second nurse?

A. No.

Q. For heparin was it required that it be checked by a second nurse?

A. Yes.

Q. For Lasix?

A. It wasn't required, but we would probably do it if we were going to give it intravenously because of it wanting to be very sure.

Q. Right. Inasmuch as it was not required that Lasix be checked by a second nurse, could there be situations arise in which it was not checked and administered intravenously?

A. Yes. It was rarely administered intravenously by a nurse. If Lasix were to be given intravenously it was more likely given as a single dose by push method by a doctor.

Q. You have told me as well that potassium was an example of a drug that could be administered intravenously by a nurse. Do I have that correctly?

A. Yes.

Q. What form did potassium come



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in on Wards 4A/4B?

A. In ampules?

Q. Right. Any other form?

A. Yes, it did, but not the kind that you would give intravenously. There were also potassium tablets and elixir potassium for oral doses.

Q. Dealing with the ampule form, do you recall what colour the ampule was?

A. I would only be guessing.

Q. Was there a different ampule for infants as oppsoed to adults? Pediatric ampules and adult?

A. I would think that it came in different strengths, but I am not positive of how much came in an ampule of Lasix.

Q. I'm sorry, we are talking about potassium now.

A. Potassium, sorry. No, I don'tt think there were.

Q. There was only one form of ampule in which it was available?

A. I think so.

Q. Right. And you do not recall the colour of that ampule?



DD14

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A. I can guess that it was
purple but it is only a guess.

4

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Q. Right. Well, perhaps we
can make enquiries.

6

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Was potassium one of the drugs that
required a second check?

8

A. No.

9

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Q. So potassium could be
administered intravenously by a nurse without
the involvement of a second nurse for verification
purposes?

12

13

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A. Yes, and it was one that
was generally put in the whole bag of intravenous;
not in the buretrol.

15

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Q. And by the whole bag you
mean inserted into the bag containing the intra-
venous fluid?

18

19

Q. Could it as well be inserted
into the buretrol?

20

21

A. It could be but I think that
would be very rare.

22

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Q. You referred a few moments
ago to administration of a Lasix by IV push by a
doctor. I thought that was your language.



DD15

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A. Yes.

Q. All right. There has been some confusion, largely on my part in these proceedings, on what is and what is not an IV push.

Could you explain for us, please, what that method is for administration of a drug?

A. It is a method for putting the medication directly into the patient's vein. In that case the medication is not mixed with solution and allowed to drip in. It is not administered above the drip chamber. It is administered directly close to the vein which could be by injecting a needle on a syringe through the medication piece of the tubing close to the patient's vein or through removing the intravenous tubing from the needle that is in the patient's vein and putting the syringe directly into that needle and injecting it, or by a direct venapuncture.

If the child does not have an intravenous at all the doctor could put a needle directly into the child's vein and administer medication that way.



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Q. Do I take it there are
three different ways in which one could administer
a drug by intravenous push?

A. Yes.

Q. And in all circumstances if
a drug was administered by IV push is it administered
below the drip bulb on the IV apparatus if there
is one connected to the patient?

A. Yes.

Q. And the only circumstance in
which one would describe the administration of a
drug by IV push without an IV apparatus is if it
was administered directly into the vein of the
child?

A. Yes.

Q. There has been some evidence
as well, Miss Costello, that a clinical pharmacist
was assigned to permanent duties on Wards 4A/4B
at some point after the relocation of the cardiology
unit to those wards.

Do you recall when the clinical
pharmacist assumed duties on Wards 4A/4B?

A. December 1980. Could I
add to that, she also covered Wards 4C/D.

Q. Was there more than one



DD3.2

1 pharmacist assigned to the two wards?

3 A. One was a pharmacist and
4 the other was -- I can't think of the title.
5 Assistant or something like that.

6 Q. Was one to work on each
7 ward or did they work together on both wards?

8 A. They worked together on all
9 four wards.

10 Q. What were the duties as
11 you understood them of the clinical pharmacists on
12 the ward?

13 A. They helped with stocking
14 medications; helped with acquiring medications from
15 the pharmacy. They made a patient drug profile
16 so that they were aware of all the drugs that each
17 patient got. They assessed this for correct dosage
18 and compatibility. Sometimes they did rounds with
19 the doctors or even if they did not, if they
20 recognized something that they wanted to question
21 from a pharmacological point of view they would
22 question the doctor or they would question us. They
23 looked after getting outdated drugs out of our
24 stock.

25 They reorganized our medicine cup-
board. Later, and it may not have been during the
period you are interested in, they began a little



1
DD3.3 2 bit of discharge teaching for parents which we had
3 been doing prior to that.

4 Q. And that was advice provided
5 to parents when their child was about to be released
6 from the Hospital?

7 A. Yes.

8 Q. What would the pharmacist
9 use to prepare a patient drug profile?

10 A. The patient's chart, record -
11 I don't know what you are calling it here.

12 Q. Both. We are trying to call
13 it record. Was it a matter merely, Miss Costello --

14 THE COMMISSIONER: Not recently.
15 I have given up.

16 MS. CRONK: Q. Was it a matter
17 merely, Miss Costello --

18 THE COMMISSIONER: I have lost the
19 battle.

20 MS. CRONK: Q. In preparing the
21 patient profile record or the patient profile as you
22 have called it, was it merely a matter for the
23 pharmacist to record on a separate piece of paper
24 the various drugs that had been prescribed by
25 doctors for a particular patient?

A. Yes. She would record it and



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DD3.4 2

use her judgment to assess it.

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Q. Was there an obligation on the nurses on the wards to inform the pharmacist if they had administered a particular drug to a child?

A. No.

Q. How then would the pharmacist be satisfied that the drugs reflected in the doctor's orders were the only drugs that had been administered to any particular patient?

A. If they were recorded she would assume they were administered. If something was neither recorded nor she saw it given, I don't know.

Q. If it wasn't recorded and she didn't see it administered she would assume it wasn't administered?

A. Yes.

Q. Was it part of the pharmacist's duties to observe or check the drawing up of medications while they were on the ward?

A. No.

Q. Was it part of her duty or her assistant's duty to prepare and monitor an inventory of the drugs that were available on those



DD3.5

wards?

A. I am not clear about that. When they came they did take over responsibility for keeping the stock up to requirements, but I don't know to what extent they had an inventory.

Q. Do you know whether or not they kept an inventory of the stock drugs on the wards?

A. No, I don't know.

Q. Was it part of their duty and responsibility as you understood it to monitor the amount of drugs that were being used on the ward at any given time frame?

A. I am not aware that it was.

Q. Do you know what the hours of duty normally were for the clinical pharmacist and the clinical pharmacist assistant?

A. Approximately 8:30 to 4:00.

Q. Was there ever an occasion when they were on duty during the night shift insofar as you were aware?

A. No. I don't know whether it clarifies if I say to you they also had functions in the pharmacy as well as those four wards so that there was never necessarily a pharmacist constantly



Costello
dr.ex. (Cronk)

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DD3.2

on any ward.

3

Q. When they were there I take it that they would be available at the nursing station to provide advice to the nurses if it was requested?

6

A. Yes, they would.

7

Q. Was it part of her duty or part of her assistant's duty to monitor the number and type of medication errors that occurred on either of those two wards?

10

11

A. I am not sure it was defined that way but we did make incident reports for any medication errors that happened.

12

13

They went on the same incident report as a fall or any other type of incident at that time. Later, and I think it is after the period that you are concerned with, there was a separate incident report made only for medication errors.

14

15

16

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19

The Pharmacy Department was notified of any medication errors, but I am not positive whether it was a definite duty of our own clinical pharmacologist except that it would be a natural thing.

20

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22

23

Q. Well, whose duty was it, Miss Costello, on Ward 4B, for example, to complete an incident report if a medication error had occurred?

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A. The person who either made the error, or the person who recognized the error.

Q. If a medication error had occurred during the day when you were on duty as head nurse, is that a matter that would be brought to your attention?

A. Yes, it is.

Q. Would you expect that in all circumstances where a medication error had occurred you would be informed of it?

A. Yes, unless I were on vacation, but during the 24 hours, during weekends, any time, yes.

Q. Would that be true as well if a medication error took place during the night shift?

A. Yes.

Q. You would expect that would be brought to your attention the following morning?

A. Yes.

Q. Did you have any direct involvement in the completion of incident reports of medication errors on those two wards?

A. As head nurse I would sign it and either check off or make some comment about whether the staff were spoken to and what were our plans to



1
2 prevent another error like that.

3 Q. If there was an increase in
4 the number of known or detected medication errors
5 which occurred on those two wards during this nine-
6 month period, would you necessarily be aware of that?

7 A. If it were an obvious increase,
8 yes.

9 Q. I take it that all medication
10 errors which occurred on your ward, be it during the
11 day or at night, you have told us would be brought
12 to your attention?

13 A. Yes.

14 Q. Did you during the nine-month
15 period observe that there appeared to be an increase
16 or a rise in frequency of medication errors on
17 either Ward 4A or Ward 4B?

18 A. No, but I know that I have
19 also talked to you about one particular time when
20 we had four incidents and that was unusual in such
21 a short period of time. But no, there was no
22 increase in medication errors that I am aware of
23 during that time.

24 Q. Had there been an increase
25 or a rise in frequency of medication errors on Ward
26 4A, would you by virtue of your position be aware of



that?

A. Informally.

Q. You mentioned a sequence of errors which did occur about which we have spoken. The evidence before the Commissioner to date is that there were three errors which occurred on Wards 4A and 4B during the month of October, 1980, and a fourth error during the month of November, 1980, all of which involved digoxin in the giving of a second dose of digoxin at approximately 9:30 in the morning when one had in error been given at 5:30 in the morning.

A. The correct dose was at 5:30 and the error was the repeat at 9:30.

Q. Are those the series of errors to which you referred a moment ago?

A. Yes.

Q. And apart from those do I have it that you were not aware of any increase in medication errors on either of those wards during that nine-month period?

A. No, I was not.

Q. We have also heard evidence, Miss Costello, concerning the medication error which involved a patient by the name of Kristin Inwood,



1
2 and a medication error involving Brian Gage, both
3 involving digoxin; are you familiar with those two
4 errors?

5 A. I am familiar with Kristin
6 Inwood, not with Brian Gage.

7 Q. Other than those two errors
8 and the four which occurred in October and November
9 of 1980, are you aware of any other medication
10 error involving digoxin which occurred during this
11 nine-month period in respect of any of the 36
12 children whose deaths are being investigated by
this Commission?

13 A. No, I cannot say that I am,
14 but I can't absolutely say that there were not,
15 that I am not aware of.

16 THE COMMISSIONER: I will expand
17 the question, are you aware of any digoxin errors
18 that took place involving any children, other than
19 the four in October and November, and Gage and
Inwood?

20 THE WITNESS: I think the answer
21 is the same, I am not aware of any, I am sure
22 there were none that were not reported, but I am
23 not sure you, or Miss Cronk, that I have the
24 incident reports for all of the errors.
25



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3 THE COMMISSIONER: I don't think
4 you meant what you said, you are sure there were
5 none that were not reported?

6 THE WITNESS: None that we are aware
7 of that are not reported, I am sorry.

8 THE COMMISSIONER: You are sure
9 there were none that were reported?

10 THE WITNESS: No, I am not.

11 THE COMMISSIONER: Wait a minute.
12 It is getting to the end of a long week and maybe I
13 am not understanding. I really just want to know,
14 you are sure that those were all the errors that
15 were reported, am I correct in that?

16 THE WITNESS: No, I am not sure,
17 because I have not got access to where those
18 incident reports are, the incident reports that
19 I have seen are a few.

20 THE COMMISSIONER: I just want to
21 ask what you are sure of, if you are sure of anything,
22 you do not need to be ashamed if you are not, but
23 are you sure of something? Because I thought you
24 were sure of something that you were going to tell us.

25 THE WITNESS: I have lost it now.

MS. CRONK: May I try again, sir?

THE COMMISSIONER: Yes, all right.



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3 MS. CRONK: Q. Other than the four
4 which occurred in October and November which I ask
5 you to accept do not relate any of the 36 children
6 about whom we are concerned, and other than the one
7 involving Kristin Inwood about which you know, and
8 the one involving Brian Gage, are you aware of any
9 other medication errors involving digoxin that
10 occurred with respect to any of the 36 children
11 whose deaths we are looking at.

12 THE COMMISSIONER: No, I wanted
13 to --

14 MS. CRONK: I know you did, sir,
15 and that is the next question.

16 THE COMMISSIONER: All right.

17 THE WITNESS: I don't know how
18 to answer it except I know I am not aware of that,
19 but I have not had any availability of incident
20 reports to go back and check my memory and say are
21 there others that I don't remember, or I have not
22 seen an incident report for now.

23 MS. CRONK: Q. I understand. For
24 the same reason you are unable to assist the
25 Commissioner as to whether or not there were any
other medication errors involving digoxin in other
children?



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A. Yes.

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Q. Was there ever an occasion, Miss Costello, and I think you may have answered this in your discussion with the Commissioner; was there ever an occasion when a member of the nursing staff, any member of the nursing staff on either Ward 4A or 4B suggested to you that a medication error had occurred in circumstances where an incident report was not prepared and filed?

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A. No, if that happened we would immediately prepare one.

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Q. You have told us, Miss Costello, that you normally work the day shift on Ward 4B; if a patient suffered a cardiac arrest and died during the day shift on either Ward 4A or 4B during this nine-month period, I take it that is a matter that necessarily you would be made aware of?

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A. Yes.

Q. And similarly if a patient suffered a cardiac arrest and died on either ward during the night shift, would you necessarily be informed of that when you reported for duty the next day?

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A. Definitely and formally on 4B; informal communication channels I would very likely know about 4A.



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Q. We have heard in evidence,

Miss Costello, from various witnesses that commencing in July 1980 there was an increase in the number of cardiac arrests and deaths which occurred on those wards, and specifically there were five deaths during the month of July 1980, and one on the 30th of June, that of Laura Woodcock that is of concern to this Commission.

When did you first become aware that there was an increase in the number of cardiac arrests and deaths on those wards?

A. In July, late July.

Q. Do you recall how that came about?

A. What can I say? I was just aware that it did happen and it appeared to be more frequency and more in number than we were accustomed to.

Q. Did you also observe at that time, that is the end of July 1980, that most of these arrests and deaths were occurring at night in the early hours of the night?

A. Yes.

Q. Were you aware at that time, or did you observe at that time that many of these



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deaths were occurring in the presence of members
of a particular nursing team?

A. I probably knew but it
didn't sink in as a concept at that time.

Q. Did it subsequently occur
to you?

A. Yes.

Q. ...as a conscious thought
that these deaths appeared to be occurring in
association with attendance of a particular nursing
team?

A. Yes.

Q. When did that form a
conscious thought in your mind?

A. I think early on.

Q. You told me that you don't
think it was as early as the end of July?

A. No.

Q. Was it as early as the end
of August?

A. I can't be sure, perhaps
the end of August or into September.

Q. And at that time were you
aware that most of these deaths although not all,
but most of these deaths and arrests had occurred on



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Ward 4A as opposed to Ward 4B?

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A. Yes.

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Q. And was the fact of the

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arrests and the number of the arrests a matter that
was the subject of discussion by the nurses on your
ward?

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A. Yes, predominantly in the

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beginning it was the nurses on Ward 4A, but ours
were very quickly involved too.

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Q. Did any particular nurse

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or nurses come to you and as Head Nurse on Ward 4B,
during the summer of 1980 to express concerns to
you regarding the increased number of arrests and
deaths?

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A. I can't name specifically

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that anyone did, it was discussed in ward meetings
and we did discuss it generally. At some point that

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I cannot label a date for, on a Sunday morning when
I was working in the nurse's office, combined

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nurses from 4A and 4B asked me for a meeting to talk
about these concerns and their -- since they were
having frequent arrests at night and very ill
children, was night staffing adequate.

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Q. Do you recall who asked you

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to hold that meeting?

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A. No, but I have some names in my notes of some of the people who were there, but I don't know who initiated it, and I wrote the notes later so I don't know all of the people who were there.

Q. I will come back to the matter of your notes in a moment. Do you remember when that meeting was held?

A. No. I have great difficulty with that. The only memory jog I have is that at the time the nurses were complaining that MaryAnn Gracewell was a new nurse and this was particularly difficult for her. I am not sure of the date she was hired but she was hired before we left 5A, so that makes me think that it was relatively early.

Q. Why was it particularly difficult for Miss Gracewell as opposed to the other nurses?

A. I think these people just used her as an example in the meeting that morning to say, here is this girl who is here, she is relatively new and it is very hard for her to live with all this.

Q. If I suggested to you that the meeting took place towards the end of July 1980,



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does that assist you in recalling when you were asked to hold the meeting and when the meeting in fact was held?

A. I haven't been able to find any written thing, if you have found something in writing I will believe you, but I have not been able to find anything, only my own notes that were done later that I do not have a date.

Q. Before you believe me too quickly, Miss Costello; Mr. Registrar, could you show the witness please Exhibit 300.

A. Thank you.

Q. Miss Costello, for the benefit of the Commissioner and others I refer you to the bound volume containing the Communications Books for both Wards 4A and 4B and as well the Ward Meeting Books for Ward 4A. I ask you to turn if you would please to the first tab, which is the Ward 4A Communications Book, to page 5; do you have that, Miss Costello?

A. Yes.

Q. The entry on that page, Miss Costello, relates to a meeting held on July 31, 1980; it appears to pertain to the staff, or the nursing staff of Ward 4A, and at least one of the matters that figured largely in the discussion at



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that meeting was the subject of the recent deaths that had occurred on the cardiology wards; did you attend that meeting?

A. I don't think so, and this is not the one that I was talking about.

Q. To the best of your knowledge were any of the Ward 4B nurses involved in this meeting?

A. Probably not, but if somebody was relieving there they may have been there, I am not sure.

Q. Were you aware that the Ward 4A nurses had met and discussed the deaths that had been occurring on the ward during the month of July, at this time?

A. I think so, but it is difficult to be confident that I knew it at that time, or did I learn it later. I knew they were discussing -- I knew they were worried about it. I heard them expressing their worries in an informal way. I can't tell you absolutely sure I knew this meeting occurred at that time. I don't know whether I did or not.

Q. Well, to assist you, Miss Costello, there were, as I have said, five deaths



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EE2.7 2 on those wards during the month of July; Baby
3 Perreault died during July; Baby Bilodeau, Baby
4 Taylor, Baby Dawson and Baby Hoos. It is my
5 understanding that two of those children -- I am
6 sorry, and Laura Woodcock on June 30th - that two
7 of them died on Ward 4B, that is Laura Woodcock
and David Taylor. Do I have that correectly?

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Q. Do you recall the deaths of the other children whose names I have mentioned: Dawson, Hoos, Perreault?

A. Dawson, Hoos definitely, Perreault vaguely but I don't recall much detail. I know those babies died around that time.

Q. The notes made in the Ward 4A meeting book concerning that July 31st meeting suggests that there was concern expressed and confusion in the minds of the Ward 4A nurses as to the cause of Amber Dawson's death?

A. Yes.

Q. Do you recall that patient Amber Dawson?

A. Yes.

Q. Do you remember there being doubt expressed by the 4A nurses as to why that child had died?

A. Yes.

Q. Were there similar doubts or similar concerns expressed by any of the Ward 4B nurses to your knowledge?

A. About Amber Dawson?

Q. Yes.

A. It is difficult to answer.



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We worked very closely together and we probably did discuss it but I can't tell you, only that I know that they did.

Q. Well, do you have any specific recollection of any nurse on Ward 4B indicating to you at any time that she was uncertain as to why Amber Dawson had died or that she was concerned about that child's death?

A. No, not specifically.

Q. All right. Do you recall any discussion amongst the Ward 4B nurses in which you were involved where concerns were expressed as to the cause of death of Lillian Hoos?

A. No.

Q. All right. I refer you as well to the notes concerning that child in the Ward 4A communications book. Again, there is a suggestion that there was doubt at least in the minds of the Ward 4A nursing staff as to the cause of that child's death.

A. Yes.

Q. All right. Did either of those deaths form the subject matter of a discussion between yourself and Mrs. Radojewski the other head nurse?



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3 A. I can't honestly say yes or
4 no, I don't remember. I think definitely I
5 talked about Amber Dawson but I can't tell you
6 definitely that it was Mrs. Radojewski.

7 Q. Do you recall Mrs. Radojewski
8 as your colleague, as the other head nurse on
9 Ward 4A, expressing to you at any meetings or
10 discussions that you had together that she was
11 concerned about the deaths that had occurred during
12 July and, more particularly, the reason why some
13 of those children might have died?

14 A. Yes.

15 Q. Do you recall when that was?

16 A. Probably in July. I can't
17 recall specifically.

18 Q. Did she indicate to you at
19 that time that she was concerned about any particular
20 children who died?

21 A. It is very difficult to know
22 what I know from the informal communication channel
23 and what I know from a very specific thing. I know
24 it but I can't tell you which way I found out.

25 Q. Well, as best as you could
recall it, Ms. Costello, do you recall Mrs. Radojewski
being concerned about specifically a particular child



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2 or particular children who died in July or was
3 she concerned generally about all the deaths?

4 A. Both.

5 Q. All right. Do you remember
6 which children particularly she was concerned about?

7 A. I particularly remember
8 Amber Dawson.

9 Q. All right. Was that by
10 virtue of your discussion with Mrs. Radojewski or
11 you can't remember?

12 A. That's what I'm saying, I
13 can't remember where I got some of the knowledge
14 that I had, whether it was informally or very
15 directly.

16 Q. All right. Well, what do you
17 remember being the issue surrounding the death of
18 Amber Dawson?

19 A. I remember that she was ill
20 for a long time. I remember her mother and her
21 mother's great concern and remember knowing her
22 mother a little bit and perhaps I knew her a little
23 bit more than some mothers because I tried some
24 reassuring work with her when I worked at weekend.
25 I do remember that there was concern that they weren't
sure specifically why Amber Dawson died when she did.



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Q. Was it thought by the nursing staff including the 4A nurses that the child died at a time when they wouldn't have expected her to die?

A. Partly, but she had been quite ill with many problems for quite a while but I think they did feel that there was no immediate reason at the time she died.

Q. All right. Was the concern of the 4A nurses and the concern expressed to you by Mrs. Radojewski communicated insofar as you are aware to any of the cardiologists connected with the cardiology unit at the end of July?

A. Yes, it was.

Q. All right. With whom were those discussions held, as best as you can recall it?

A. In an informal way I think we talked with the Fellows and the cardiologists who were on the ward, probably all of them. I know from reviewing our meetings that Liz spoke with Dr. Contreras who was one of the cardiology Fellows assigned to the ward, that I spoke with Dr. Rowe who at that time was ward chief.

Q. Do you recall when you spoke with Dr. Rowe?



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A. I can't tell you the exact date I spoke with him but the note in the ward meeting book that tells me when he responded with his reasoning was July 5th, '80.

Q. I'm sorry, July the 5th?

A. '80. Do you want me to check that I am really sure of that?

Q. Yes.



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A. August 5th, '80, I'm sorry that Dr. Rowe spoke with me about what I must have spoken to him within the few days before that and July the 31st, '80, Liz spoke with Dr. Contreras.

Q. Well, Ms. Costello, first, what are you reading from?

A. Just my own notes but they are reminding me where it is in here somewhere.

Q. All right. Well, on the same page to which I directed your attention, that is page 5 of the Ward 4A Communications Book, there is a note dated August 5th.

A. That's right.

Q. All right, which indicates that Dr. Rowe had commented upon the cause for the recent deaths that had been occurring on the wards.

A. Yes.

Q. Whose note is that?

A. It is my writing.

Q. Is it that note that leads you to believe that you spoke to Dr. Rowe prior to the 5th of August?

A. Yes.

Q. Do you recall what specifically you raised with Dr. Rowe when you spoke to him?



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A. Not terribly specifically, but generally the increased number of deaths, the increased number of arrests that were occurring, the fact that the babies were not able to be resuscitated, the anxiety of the nurses around this and our concerns, were we doing everything we should in observation and treatment of these children.

Q. Do you recall telling Dr. Rowe when you spoke to him that it appeared to you that many of these deaths were occurring at night?

A. I don't know whether I did or not.

Q. Did you have any discussion with him as to the place where the children had died, that is 4A versus 4B?

A. I don't know whether I did.

Q. All right. Were you specifically involved at any time in the care of David Taylor, Ms. Costello?

A. Yes.

Q. That child you have indicated died on Ward 4B?

A. Yes.

Q. After the child's death was there any discussion amongst the Ward 4B nurses of which



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you are aware or amongst any of the 4A nurses as to the cause of David Taylor's death?

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A. Yes, we talked about it. He died soon after admission, he was considered to be a very ill child. Again, I think we worried, did we do everything and was the investigation done soon enough and was everything done correctly, but we did think that his condition probably warranted the fact that he died at that time.

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Q. Was there any concern, as you can recall it, either in your own mind or in the minds of any of the nurses with whom you discussed the child's death as to the time at which he died or the manner in which he died?

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A. No, other than it is unfortunate when a child dies very quickly after admission because we haven't got a data base for long to see how he is and he deteriorates very quickly before we have a lot of knowledge or before the doctors have a lot of knowledge. But other than that, no.

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Q. Do I have it correctly then that you were not particularly surprised when that child died?

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A. That's true.

Q. Do you remember any concern or



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any question being raised by any member of the nursing staff or indeed any of the cardiologists as to the possible involvement of digoxin intoxication in that child's death?

A. No, I don't.

Q. Did you discuss that child's death with Dr. Izukawa?

A. I don't know. If he was on the ward at the time probably, but I don't specifically remember that.

Q. Well, I'm sorry, to help you, Ms. Costello, Dr. Izukawa is the cardiologist on call the night David Taylor died. Indeed, he attended at the Hospital following the child's death but he died in the early hours of the morning when presumably you were not on duty. Do you recall one way or the other having discussed the child's death with Dr. Izukawa?

A. I can't tell you whether I did or not.

Q. Do you remember any suggestion having been made by any of the nurses or any of the doctors with whom you had contact as to the possible involvement of digoxin in the child's death at all?

A. No, I don't. I knew the child



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was on digoxin, I knew that he was given intravenous digoxin on the afternoon of his admission, which is rare, but, no, I did not know of any question of the amount of digoxin or of his digoxin level or of concerns about digoxin regarding his death.

Q Why is it rare in your view, Ms. Costello, that a child would receive a dose of digoxin on the day of his or her admission?

A I'm sorry, I confused you. It is rare that it is given intravenously.

Q I'm sorry, right. Can you help me as to why that is the case?

A It is rare that it is needed that the digoxin effect is needed that quickly. It can usually be established by giving oral digoxin and when a patient has not been on digoxin they are given larger doses to start with to build up a therapeutic level, that usually is sufficient.

Q In circumstances where it is thought appropriate that a child receive the benefit of the drug quickly in those circumstances I take it administration of the drug intravenously would not be unusual?

A In those circumstances it wouldn't be unusual but those circumstances would be rare.



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Q I understand, thank you. Were you involved as well in the care specifically of Alan Perreault, Ms. Costello, who died on July 8, 1980 on Ward 4A?

A No, I don't think so.

Q All right. It is my understanding that you were on duty that day, do you recall that, July '80?

A No, I don't.

Q Do you have any recollections concerning the death of that child and any discussions which may have been held concerning his death?

A No, I don't.

Q Do you recall any question being raised by any of the Ward 4A or Ward 4B nurses with you specifically concerning that child's death?

A No.

Q When you became aware, as you have told us that you did, in July of 1980, or at least the end of July, 1980 of the increased number of arrests and deaths on the wards, apart from speaking to Dr. Rowe, did you as well speak to any member of the nursing administration staff in the Hospital or any of the nursing supervisors concerning the observations that you had made?



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A. I did but I'm not sure it was
as early as July.

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Q All right. Do you recall who
you did speak to? Was it a nursing supervisor?

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A. Yes, I spoke with Barbara
Greenleaf who was acting co-ordinator for our area at
that time.

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Q Do you recall when you spoke to
Ms. Greenleaf?

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A. Around September, October.

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Q Okay.

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A. And also with Lynn Johnston, who
was the night supervisor at that time, some time around
then, I can't tell you exactly.

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Q Around September, October, 1980?

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A. I think so.

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Q Okay. Well, you have told us
that you believed that you spoke to Dr. Rowe and that
you believed that Mrs. Radojewski spoke to
Dr. Contreras some time before August 5th. Do I have
that correctly?

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A. Yes.

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Q To the best of your recollection
were there any discussions held in which you either
participated or of which you are aware with nursing

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supervisors or members of the nursing administrative staff of the Hospital during the summer, that is, July or August, concerning the deaths that were occurring on these wards?

A. Not specifically sure of that, no.

Q. You don't recall?

A. No, I don't specifically recall whether we did or not.

Q. All right.

MS. CRONK: Sir, may we adjourn at this time?

THE COMMISSIONER: Yes. Well then, until 10 o'clock for the in-camera argument and thereafter, which may be very shortly thereafter, here to continue with this examination.

MS. CRONK: Thank you, Mr. Commissioner.

--- Whereupon the Hearing was adjourned at 4:30 p.m. until Monday, January 30th, 1984 at 10:00 a.m.

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